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THE BACILLUS TUBERCULOSIS AND THE ETIOLOGY OF TUBERCULOSIS.—IS CONSUMPTION CONTAGIOUS?

SECOND COMMUNICATION.

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GENERAL CONSIDERATION.

A LITTLE over a year ago* I had the honor of presenting for your consideration some anatomical points in refutation of the etiological relations of the bacillus tuberculosis.

At that time I announced some original observations regarding the histology of scrofulous tissue, tending to place the question of heredity in tuberculous disease upon an anatomical basis. These peculiarities of scrofulous tissues I submitted as elucidating the etiology of tuberculosis, showing that the peculiar histological condition of the individual, under the influence of simple irritants, and not the character of the irritant, is responsible for tubercular inflammation. It gives me pleasure to state that these observations have since been confirmed by several competent histologists, whose articles on this subject will soon appear in print; besides which a general interest has been manifested by favorable comments both in America and abroad.

Shortly before the publication of these observations, Koch, of Berlin, had brought forward the discovery of the now famous bacillus tuberculosis, affirming it to be the sole cause of pulmonary phthisis and other forms of tubercular disease, and claiming for it, besides exclusive pathogenetic properties, special morphological and chemical characteristics.

In my first paper I denied some of these propositions upon grounds of personal investigation, and subsequently Koch's researches were also severely criticised by a number of other observers.

As interesting and valuable as the discovery of Koch is, from a biological stand-point, its practical value is decidedly overestimated, and has, in my opinion, not nearly the significance for medical science which the enthusiastic followers of Koch ascribe to it. The influence of the discovery was, however, great in strengthening the traditional and unwarranted belief in the contagiousness of phthisis, as held by a small part of the profession and community. On the other hand, this belief led to the popularity of the discovery. In this respect the bacillus theory has perhaps been harmful, and, taking the consequences into consideration, we should not accept such a theory without the closest scrutiny.

Two practical benefits may accrue from this discovery. The first is that the fear of the effects of the bacillus may induce greater cleanliness in hospital management and enforce improvement in hygienic matters in general. It is doubtful whether the removal and prompt destruction of the sputum would have any influence in checking the spread of phthisis, as the disease is found as often, if not oftener, in the clean palaces of the wealthy as in the unclean huts of the poor. The second advantage resulting from the bacillus theory may be that physicians may become induced to make more use of the microscope in diagnosis; yet in this respect the general use of the microscope is hardly practicable, on account of the thorough technique and experience required.

To-day, while the bacillus is acknowledged as a common morphological concomitant of tubercle, the pathogenetic properties are denied it by the best pathologists and clinicians, on account of a want of sufficient confirmation of the evidence thus far offered. The followers of Koch's theory are, however, numerous, but they are recruited largely from the ranks of clinical teachers, book-writers, and others possessing no opportunities for personal investigation.

It may be well to state that, upon my visit to Koch last summer, made with the purpose of doing justice to this important question, I was gratified in many respects. I found Koch an earnest and conscientious worker, and not as dogmatic and extreme

* Studies from the Pathological Laboratory of the University of Pennsylvania, xi.; "The Bacillus Tuberculosis and some Anatomical Points which suggest the Refutation of its Etiological Relation with Tuberculosis, by H. F. Formad." Philadelphia Medical Times, vol. xiii. p. 109.

in his views as would appear from his writings; nor is he as self-satisfied and as rash to jump at conclusions as are some of his followers. Koch has the co-operation of an excellent staff of assistants, all able mycologists; but it was a matter of surprise to me that there was not a single competent pathologist connected with his laboratory; and such services are evidently much needed to give to the observations made there the proper interpretation from a biological and anatomical stand-point. I was also pleased to learn in Berlin that the discovery of the bacillus was exaggerated not so much by Koch himself as by the Imperial Board of Health, which employs him, and by his over-zealous followers in the profession. There is strong evidence, however, that Koch's investigations are biased by the determination to find for each specific disease a specific fungus.

Following out the various phases in the study of tuberculosis, I am sorry to see that the entire subject is now being considered from a purely etiological basis with reference to bacteria, while the study of the anatomical and biological relations is wholly neglected.

I admire the beautiful bacteridian discoveries of Klebs, and particularly those of Koch in connection with the etiology of tuberculosis. The accomplishment of these results is a triumph for scientific botany and mycology; but these studies are much too one-sided to have an application to scientific medicine. The bacillus is there. It is concomitant with most tubercular lesions. It is diagnostic of tuberculous change. It is, on account of its irritant properties, one of the causes of tuberculosis. But this forms no reason for asserting that tuberculosis should be considered a contagious disease, without further investigation and proofs. A contagious disease can have only one cause. I cannot agree with those who define the predisposition to phthisis as being a condition of the organism which offers a favorable soil for the tubercle-bacillus. Nor can I believe that inheritance is explained by subsequent infection from cohabitation, *e.g.*, that children become scrofulous by living with consumptive parents.

The latest fruits of the bacillus studies have even inspired Baumgarten (*Centralblatt f. d. Med. Wis.*, Aug. 4, 1883) and several others to come to the conclusion, in reference to the hereditary nature of tuberculosis, that the bacillus is transmitted in its larval state from mother to fœtus in intra-uterine life! One would think, however, that one of the most wonderful effects of the tubercle-bacillus is manifested by the change it produced in the direction of reasoning powers of some of our pathological and clinical investigators, both at home and abroad. Some of the younger pathologists are even affected by a regular fanaticism for bacterian studies in tuberculosis. These studies now take the place of their former excellent pathologico-anatomical studies. Consideration is no longer given to the tissue-changes, or the nidus which invites the bacteria and nourishes them. In fact, Koch's followers in their enthusiasm exaggerate matters, and, to Koch's own amusement, go further in their bacillus speculations than he himself thinks justifiable. It is really painful to read how some of the younger German pathologists and a few of the prominent English surgeons, under the influence of the bacillus craze, will make in their publications assertions entirely unwarrantable. They describe, for instance, with the greatest ingenuity and exquisite minuteness, how "one or more bacilli" will produce certain histological changes in the lungs or in the peritoneum, designating the exact route to the same; how the different cells, the lymphatics, and the blood-vessels are affected; how the bacilli convert one variety of cells into another; how they manufacture giant cells and cheesy material; how acute and chronic phthisis is produced by the bacilli, and the quantity necessary for each; how tubercles develop only and exactly in those places where the bacillus becomes lodged; how, if bacilli alone are inhaled, miliary tubercles form; and how, if the bacillus is accompanied by some other irritants, a broncho-pneumonia will ensue.

All of the above statements are made by scientific medical men and pathologists, and offered as broad facts in full earnest! I only have to say that here evidently observation is substituted by imagination and mere speculation; and all this is done for the sake of the convenience in explaining a disease by pretty hypotheses.

The only men who attempted to repeat Koch's experiments, besides the work done in the pathological laboratory of the University of Pennsylvania, were Spina (Studien über Tuberculose, Wien, 1883)

and Watson Cheyne. Of the latter two scientists, Spina came to results entirely different from those of Koch, and they disprove beyond doubt some parts of Koch's hypothesis. From an analytical and critical point of view, Spina's studies of tuberculosis are excellent, but the technical part of his investigation is deficient, and hence not satisfactory. Watson Cheyne, to whom the "British Association for the Advancement of Science by Research" had intrusted the investigation of tuberculosis and the testing of Koch's researches, did not do justice to his mission. From Cheyne's report (*The Practitioner*, April, 1883) it is seen that he made no earnest attempt to study the nature of tuberculosis, because all he did was to study and experiment with bacteria met with in tuberculous lesions. He went to see some of the different mycologists, consulting only believers in the germ theory; obtained some French and German bacteridian material, and, after testing the same, he reports with great emphasis that Koch's bacilli are a more genuine tubercular virus than Klebs's or Toussaint's micrococci. He did not inquire, nor did he care, whether tuberculosis may have any other cause! He simply imitated some of Koch's experiments with the bacillus material in rabbits and guinea-pigs (only), and obtained, of course, the same results. Furthermore, he made some control experiments, which, as I will show, pass for naught, as they are much more deficient than those of Koch.

There are a number of excellent studies in reference to the occurrence of bacilli in the sputum and in tuberculous tissues; but the main part of Koch's hypothesis, *i.e.*, the etiological relation of these bacilli to tubercular disease, remains still unconfirmed.

My own researches on tuberculosis were made from a stand-point different from that of Koch, and they were undertaken five years ago, being carried on continuously since that time by myself and assistants. My object was to investigate the natural history of the disease, without being influenced by any preconceived views. While due attention was paid to external agencies in the production of tuberculosis, the part played by the animal or human organism itself, the behavior of its component cells, and the primary changes in the tissues were not lost sight of.

I may state that I was fortunate enough to be able to utilize the material of over four hundred cases of tubercular disease from the autopsy table, including a number of cases studied in the pathological institutes in Europe at various times.

My present research on tuberculosis, with special reference to the bacillus question, was carried on during the last year and a half, under the auspices of the provost of the University of Pennsylvania, Dr. William Pepper. This communication should not be considered a report on my investigations, as these are not yet concluded; but a detailed report of these investigations will be made next summer. Some of the positive results achieved will, however, be referred to in the present paper; otherwise it merely embodies a general critical survey of the question of the etiology of tuberculosis, based upon a careful perusal of the literature of the subject and upon personal observation.

I may state, at the outset, that while the results of my observations force me to-day to make some concessions to Koch, namely, that his bacillus, on account of its irritative properties, can produce tuberculosis under certain conditions, I am firmer than ever in my former conclusions, from the results of repeated observations, that tuberculosis may arise from other causes. The bacillus may be one of the causes, conditionally, but it is not THE cause. The question of predisposition stands in the way of the acceptance of the bacillus theory. Furthermore, I will try to show that tuberculosis is not a contagious disease, and it is particularly in reference to this that I am glad to bring the present subject before the Society, desiring to profit by the discussion which is to follow as a result of the experience and the clinical observation of the individual members of the Society.

The question of the contagiousness of phthisis is one of supreme importance, not only from its scientific but also from its social aspects.

For convenience in treating the subject of the etiology of tuberculosis, I shall speak of it under the following headings:

1. The definition, the anatomical character, and the etiology of tubercular lesions, including pulmonary phthisis.

2. The predisposition; the predisposing conditions; scrofulosis.

3. Tuberculosis without predisposition, due to inflammation of serous membranes.

4. Question of contagiousness; clinical aspect.

5. The bacillus tuberculosis.

6. Experiments "pro" and "contra;" traumatic tuberculosis.

Conclusions.

All these considerations will have to be of necessity very brief.

I.—THE DEFINITION, THE ANATOMICAL CHARACTER, AND THE ETIOLOGY OF TUBERCULAR LESIONS, INCLUDING PULMONARY PHTHISIS.

No definite understanding concerning a disease can be arrived at unless some fixed conception of the anatomical characters and various expressions of the lesions of that disease is formed. Thus, as regards the question of tuberculosis and pulmonary phthisis, the matter would be much simpler if a general understanding could be arrived at as to the definition of tuberculosis and phthisis in its different anatomical manifestations. The pivot of the question is what to call a tubercle or a tubercular lesion.

The traditional conception of a tubercle being a miliary node, the belief is that nothing is tuberculosis unless expressed by nodes, and that everything is tuberculosis that appears to the eye as containing nodes. These misconceptions are what bring the confusion and prevent the settlement of the question of tuberculosis, both at the post-mortem table and in the hands of the experimenter.

One of the results of this confusion is that some clinicians divide pulmonary phthisis into catarrhal, cheesy, fibroid, and tubercular proper, because they do not see tubercle nodules in some of these forms of phthisis. They seem not to be aware of the fact that miliary tubercles do not belong necessarily to the picture of pulmonary phthisis; and, on the other hand, that those nodes which occasionally appear as miliary tubercles are not miliary tubercles at all, but are only miliary foci of broncho-pneumonia, due to aspiration, as will be explained later. Miliary tubercles, if at all present, usually form a part of a general disease, a tuberculosis of the whole body. In rare instances, when the miliary eruption takes its departure from the lung, the miliary nodules may be limited to the lung.

A more serious matter is the mistake that experimenters make of interpreting as tubercles the so-called inhalation tuberculosis, artificially produced in animals by means of a spray with tuberculous and other matter. The nodules produced in the lung under these circumstances are not miliary tubercles,—in fact, no tubercles at all. They are simply miliary broncho-pneumonic foci, limited to those terminal collections of air-vesicles, called acini, in which some of the inhaled irritative material became lodged. The natural round boundaries of these acini correspond exactly to the usual size of miliary tubercles, and appear as such even under the microscope, although filled merely with an unorganized inflammatory exudate. The uniform distribution of these foci is due to the fact that the inhaled irritating particles are distributed only to individual and the most accessible bronchioles and acini, thus simulating a true miliary tuberculosis of the lung. Similar broncho-pneumonic foci occur in the human lung from self-aspiration of tuberculous material from a primary focus to some other portion of the lung or throughout the whole lung. This was proved long ago, but the inhalation experimenters appear not to be aware of that fact. Careful personal observations and experiments, to be recorded in my forthcoming report, have convinced me that such inhalation experiments prove nothing, either for or against the contagiousness of tuberculosis, in connection with which they have been brought forward as the strongest affirmative proofs. Furthermore, it must also be remembered that the so-called experimental inhalation tubercles, as a rule, remain local.

On the other hand, miliary nodes or tubercles are met with, not only in tubercular lesions, but also in a variety of similar and dissimilar lesions, such as pearl disease or bovine tuberculosis, lupus, leprosy, glanders, actinomycosis, chancre and gummata, cancer, typhoid infiltration, lymphomatous and leukæmic lesions. All these lesions, even cancer ("miliary carcinosis"), are able to give rise to exquisite miliary disseminations, or eruptions, although these are most frequently observed in tuberculosis. We already recognize leprous, lupous, glanderous, syphilitic, and other tubercles, in contradistinction to tuberculous or scrofulous tubercles.

To the above nodular formations may be added a variety of minute inflammatory

foci of granulation tissue, organized around minute foreign bodies introduced experimentally into various tissues; also, "false tubercles," such as mere unorganized collections of lymphoid cells, held together by some fibrine or by some artificial or natural round boundaries, such as is the case with the referred-to "inhalation tubercles;" and further, also, the eruption and follicular enlargements in the skin and mucous membranes.

The question now arises, how to distinguish between these various kinds of nodules, apart from their clinical features. They may all undergo a cheesy or a fibrous change, may calcify, and may contain giant cells. In all, bacilli may be found if a cheesy change occurs, or tends to occur, save in cancer and in leukæmic formation. Without desiring to appear sceptical, I must say, however, that it takes the skill of a Koch to differentiate sometimes the bacilli met with in the various kinds of nodes, even after applying all micro-chemical tests.

The true tuberculous tubercles occasionally do not show any bacilli whatever, as I will prove from personal observation, and from the reliable testimony of others. It will also be shown that the only test now left for determining the pathogenic peculiarity of tubercle—namely, the asserted exclusive property to produce tuberculosis—is conditional and uncertain, since substances not tuberculous may, under similar conditions, have the same effect.

Therefore, it is impossible to define tuberculosis, either by its anatomical peculiarity or by the pathogenic property of its nodes.

Another important point in the natural history of tuberculosis is the cheesy degeneration of its products; but here, again, we are surrounded by difficulty if we take only the cheesy product into consideration, because all the lesions mentioned before as being characterized by, and as being capable of, nodular eruptions, have the tendency to undergo cheesy change. Besides this, simple inflammatory products have been observed to undergo a similar change, as is instanced by that form of cheesy hepatization sometimes following croupous pneumonia, and also by certain forms of rapid necrotic changes, such as occur in acute septic inflammations, designated lately by the name of "coagulation necrosis." It must, however, be remembered that the total absence of cheesy masses in the body of tuberculous subjects has been observed.

To tell tuberculosis from allied lesions is only possible after a consideration of the soil in which it develops, and the location of the products, together with the clinical and anatomical manifestations.

What is the origin of tubercle nodules?

The primary occurrence of miliary tubercle nodes is, to my mind, very questionable. I have never seen it occur without the coexistence of diffuse granulation tubercle. This granulation tubercle is recognized by all as being a simple inflammatory granulation tissue, characterized by cells somewhat larger than ordinary lymphoid cells, containing usually giant cells, but undergoing very readily cheesy change on account of its deficiency in blood-vessels. This tissue is regarded by most pathologists as secondary to miliary tubercles; but I think, after careful observation, that the reverse is the case; because I have never seen upon the post-mortem table, or in animals, *primary* miliary *tubercle* nodes without the granulation tissue, while the granulation tubercle tissue does exist very frequently without the nodes. Moreover, primary *miliary* tuberculosis is unknown.

That tubercle is primarily a simple granulation tissue of inflammatory origin has been proven experimentally. E. Ziegler (*Centralbl. f. d. Med. Wis.*, 1874, No. li.) made the following interesting experiment. He inserted below the skin or into the peritoneum of animals, a number of pairs of glass covers, each pair glued together in such a manner that between them there existed an interspace just large enough to allow the entrance of white blood-corpuscles: and these corpuscles, not being severed from the body of the animal, then formed a tissue between these plates of glass, which, upon removal after various periods, could be readily examined under the microscope, and the conditions of tissue-formations traced. Under these circumstances it was observed that whenever blood-vessels had developed in the new-formed tissue between the glass plates, an organization of the cells into a perfect connective tissue took place; but, when the formation of blood-vessels had failed to occur, then a tissue simulating tubercle

tissue was formed, made up of epithelioid and giant cells, and cheesy changes had occurred. Ziegler very properly declared the latter product to be tubercle tissue. I have had, and have at present, ample opportunity to corroborate the accuracy of these observations. Ziegler's experiments were repeated in the pathological laboratory of the University of Pennsylvania, by Hammer, and at present are being carried on by Woodnut. By these experiments, made, with slight modification, after the method of Ziegler, under varying conditions and upon various animals, it was shown that the granulation tissue gradually gave origin to tubercle nodules. Furthermore, these experiments showed that the tubercle nodes and cheesy changes ensue without the action of bacilli, as the latter were found not to be present when proper care was taken, during the execution of the experiment, to exclude them.

From the examination of tubercular tissue from various sources, I may say that I have seldom succeeded in finding tubercle bacilli in newly-formed tubercular tissue made up of small lymphoid cells. In older tubercular tissue, made up of opaque epithelioid cells and giant cells with a nodular arrangement, particularly when this tissue is undergoing necrotic change, bacilli are quite common, except in some forms of tubercles of serous membranes, to be referred to later. Tubercle tissue that has undergone a complete cheesy change contains the greatest number of bacilli. Cheesy matter of any source is a dead substance, and it is usually inhabited by bacilli, if these get access to it; while other bacteria are scarce in this nidus.

Examination of materials from the autopsy table shows that tubercle expresses itself in various manners. Primarily tubercle occurs as a mere infiltration of lymphoid cells in the adventitia of blood-vessels, or as small nodular masses of lymphoid infiltration around blood-vessels or ducts of any kind; or tubercle tissue may organize within blood-vessels and various ducts. Sometimes tubercle appears as a diffuse lymphoid infiltration, extending over a larger area, showing a greater or less tendency towards the formation of nodes and cheesy or fibroid change, as in the lungs. Tubercle tissue may form masses of the size of a hen's egg, particularly in the brain and serous membranes. In the lungs, in racemose glands, and in mucous membranes, catarrhal changes always follow the tubercle infiltration. On serous surfaces primary tubercles appear often as flat or nodulated patches of various sizes (in peritoneum), or as fungoid vegetations (in synovial cavities), or even as large plastic masses (in omentum). In the skin and mucous membranes, tubercles produce eruptions, ulcers, or nodular indurations; in bones—caries, with abscess formation in surrounding parts (cold abscesses). Fibroid capsules, made up of connective tissue, due to reactive inflammation, enclose often smaller or larger tubercular masses, especially if these have undergone cheesy change.

Primary tubercle manifests itself quite variously in different animals. In guinea-pigs and rabbits, it appears mainly as small cellular infiltrates; in dogs, it often undergoes a fibroid change; in goats, and especially in cattle, tubercle often forms large nodular, sometimes pedunculated masses which often calcify;* in birds it forms, preferably in the liver, large round mulberry masses, which, on section, appear sometimes as horny radiating structures.

Secondary tubercle presents an aspect entirely different from primary tubercle, and it manifests itself in nearly all instances in but one form, namely, as a fine miliary eruption representing those well-known gray, semi-transparent nodules, of the size of a millet-seed, called miliary tubercles. These seem to lie in the perivascular lymph-spaces, and are probably distributed throughout the body mainly by means of these lymph-channels of the blood-vessel walls. Tubercles do not occur in avascular tissues. There is, however, a second form of embolic or metastatic tuberculosis which evidently distributes itself by the blood-current proper, and it appears in the form of conical masses or round nodes which may reach the size of a walnut and are located usually at the bifurcation of arteries. No mention of this form of tubercle is made in text-books, although upon the post-mortem table this variety of tubercle is a very common occurrence. Especially is

* I have met with, on the autopsy table of the Philadelphia Hospital, two cases of tuberculosis in man that were identical in every respect to bovine tuberculosis. Dr. Creighton, of Cambridge, England, describes a number of cases from his own observation, and collected from literature. Bovine Tuberculosis, London, 1881.

it seen in the lung, and, more rarely, in the spleen and liver.

Taking into consideration the enormous frequency of local tubercular lesions (counting pulmonary phthisis in this category), the occurrence of secondary or true miliary tuberculosis must be considered a rare affection. A tuberculosis affecting the lining of even the whole peritoneal cavity, including its lymphatic glands, or that of the pleural sacs, or that involving one or both lungs, must, when occurring thus in but one locality, be considered a local tuberculosis. In such instances, the tubercle spreads by continuity of structure.

It is a fact, established by Virchow, that tuberculosis is at first a local disease, and only becomes generalized secondarily. This generalization does not affect the blood, as in the infectious diseases, but it takes place simply as an embolic process, as in some tumors. Local tuberculosis in external organs and accessible lymph-glands is often a harmless affection. It is strongly related to primary tumors. Complete early removal of local tubercular lesions is practised successfully in Europe. Volkmann and others have removed, for instance, lymphatic glands, testes, and joints affected with fungoid synovitis, with the object of preventing secondary tuberculosis, and have thus prevented a general miliary tuberculosis.

Nor should a gloomy prognosis be given in early phthisis. It is astonishing what a large number of healed cavities and cicatrices in the apices of lungs are found on the post-mortem table, indicating the healing of phthisis in persons who long subsequently died from some other causes in later life.

We have seen that tuberculosis manifests itself quite differently as to structure, appearance, distribution, and determination, in the various animals, and even differently in the various organs of one individual. Our studies have shown that these variations in the expression of tuberculosis depend upon the structural peculiarities of the various kinds of animals, and sometimes even upon the difference of the structure in animals of the same species.

We have also seen that even in human beings tubercle tissue may manifest itself in various forms. In some individuals it develops rapidly, and spreads over large areas, becoming generalized and undergoing speedy cheesy change; in other individuals it develops slowly, fibroid change predominating; and in others the tuberculous product may calcify. In most individuals tubercular lesions may remain entirely local.

It is well known from clinical experience that the general condition of the organism has very much to do with the healing of a local tuberculosis. A local tuberculous inflammation may heal or become arrested in its progress, if the patient "gets strong," or it becomes more developed and aggravated if his general health "runs down." Observation has further shown that any simple, non-specific wound in a weak, ill-nourished individual may fail to heal, becoming unamenable to treatment, and probably assuming a tubercular character.

In some animals spontaneous tuberculosis is unknown, and while some animals are easily tuberculizable experimentally, in others tuberculosis cannot be produced.

It is in accordance with experience that in a large number of families the predisposition to tuberculosis is hereditary, and that their members die promptly of phthisis at a certain age from the effects of a simple "cold," while in the history of other families this affection is unknown. Every individual is liable to acquire syphilis, smallpox, and other contagious diseases, but it is proven that not every one can have tuberculosis. A special predisposition and a special individual are required. In such an individual, a simple inflammation resulting from any cause whatever can produce tuberculosis.

Therefore, for the development of tuberculosis two conditions are necessary:

1. A *definite* soil.
2. An *indefinite* irritant.

The reaction of the soil is always the same under the influence of any irritant, whether that irritant be a bacillus or not; since the result (tuberculosis) following a lesion in such a soil depends upon the character of the soil, and not upon the character of the irritant, even though one irritant, say bacilli, may act more readily than other irritants.

In view of the demonstrated fact that simple injuries of any kind can excite a tuberculosis, but only in certain individuals and tissues, it is evident that tubercu-

lization is determined by the kind of soil, and not by a specific irritant. *Tubercle should therefore be defined as being an inflammatory new formation in a specific individual or tissue.*

What is the place for tubercle in pathology? The anatomical criterion for tubercle is a granulation tissue made up of lymphoid or epitheloid cells, which, on account of deficiencies in the soil, does not undergo any higher organization or tend to heal, but tends to form nodes and undergo cheesy change. Under favorable circumstances it may heal through fibroid change. The elements of tubercle tissue may spread by continuity of structure to surrounding parts, and occasionally tend to the production of metastasis, distributing themselves by means of the lymphatic system principally, and rarely by blood-vessels; and may generalize themselves through the whole body, forming miliary nodes or tubercles.

This miliary eruption of tubercle appears to have the same relation to the primary tubercular growth as the secondary metastatic cancer eruption has to the primary cancerous growth. Like in cancer, the elements of tuberculosis may be arrested temporarily by the lymphatic glands governing the affected region.

In tuberculosis lymphoid cells form the nodes; in cancer, epithelial cells. While secondary cancer nodes are, as a rule, much larger than tubercular nodules, on account of the well-known great proliferating power of epithelium, it is also a fact that cancer may appear as a miliary carcinosis, expressed by minute nodules not distinguishable macroscopically from miliary tuberculosis. Cancer is proven to be a local disease. It is not contagious. It is infectious only to the individual who is affected by it; *i.e.*, it is self-infectious. And so is tubercle in every respect, a local, self-infectious disease.*

That local manifestation of tuberculosis in the lung which is designated by the traditional name of pulmonary phthisis forms perhaps nine-tenths of all tubercular lesions, and hence deserves some special consideration.

I class myself with those who regard all forms of pulmonary phthisis as tubercular. There are only three or four lesions of chronic wasting disease of the lung which may be excluded from phthisis. These are atelectasis, or collapse from pressure of effusions; bronchiectasis, in which the enormous dilatation of the bronchi may lead to large cavities and atrophy of lung-structure; primary fibroid changes; and abscess of lung. Yet all these lesions may become tuberculous from secondary inflammatory changes, which usually follow.

The lesions that are known as catarrhal pneumonia, broncho-pneumonia, pneumonic phthisis, cheesy pneumonia, tubercular phthisis, and fibroid phthisis are all manifestations of the one disease. Such a classification may be, however, entirely justifiable and useful for practical clinical and therapeutic purposes. Pathologically considered, phthisis is a local tuberculous inflammation of the lung which may manifest itself in various ways, the appearances depending upon the duration of the disease, the mode of onset, and the constitution and condition of the patient. Lesions representing the different forms of phthisis, and their transition from one form to the other, are often seen in the same lung.

Virchow insists that nothing should be considered tubercular unless it shows true tubercle nodules, and hence he does not recognize cheesy pneumonia—or cheesy hepatization, as he calls it—as tubercular, although he does not object to the term phthisis for this lesion.

I was fortunate enough to attend several times the classical demonstrations on this point of Virchow, the father of the view of the dual origin of cheesy matter and phthisis; yet, from our present knowledge of what constitutes tubercle, I cannot help interpreting all the forms of phthisis as of a unitarian origin. It is, after all, as Virchow himself says, only a matter of nomenclature. If we consider the presence of bacilli of Koch as the differentiating point between what is tubercular and what is not, we find that catarrhal and cheesy pneumonias are the most tubercular of all,

* Cancer and tubercle are considered analogous lesions and classed with tumors by a number of pathologists. This fact would not make it inconsistent to call tubercle an inflammatory product, as the distinction between inflammatory processes and tumor-formation is a purely arbitrary one. Virchow pointed out that the majority of tumors are purely inflammatory products (a statement antedated twenty years by Prof. S. D. Gross). A few years ago I made the question of the etiology of tumors a subject of careful personal study, which I yet continue, and I am forced to the conclusion that *all* true tumors are inflammatory products, and that no line of distinction can be drawn where the process which we call inflammation ends and where tumor-formation begins. (The Etiology of Tumors. Transactions of the Pathol. Soc. of Phila., 1881.)

because they contain, as a rule, more bacilli than any other form of phthisis.

Although cheesy pneumonia, like all forms of phthisis, remains commonly a local affection, it is seen on the autopsy-table to give rise to miliary tuberculosis at least as often as any of the other forms of local tuberculosis.

We are then at present at the same stand-point in regard to the character of tubercle and cheesy matter as Laennec (1819); and it is indeed perfectly reasonable to suppose that any cheesy matter found in a scrofulous person or animal is tubercular. Of course it is evident that tuberculosis of the lung is usually accompanied by simple inflammatory products, such as organized connective tissue (chronic phthisis), or unorganized croupous and catarrhal exudates (predominating in acute phthisis), which may undergo rapid necrotic and purulent changes, resembling cheesy material. For the latter products the name "coagulation necrosis," as applied by the Heidelberg and Leipsic people, may be employed. Tubercle-bacilli are commonly found in this coagulation necrosis. True tubercular cheesy matter should, I think, be considered only that product which is derived from the breaking down of previously well-organized tubercle tissue.

I need not refer to the details of the manifestation of tubercle in the lung, as these are too well known. But I would like to remark here that those small whitish or gray nodules, usually of somewhat irregular shape, which are seen more or less densely scattered throughout the parenchyma of lungs affected by phthisis, are not miliary tubercles, but minute foci of broncho-pneumonia.*

These minute broncho-pneumonic foci take their origin from tuberculous matter disseminated by means of air-passages, as explained before. *Miliary* tuberculosis of the lung distributes itself by means of the perivascular lymphatics, is very rarely accompanied by catarrhal changes or hepatization, and rarely arises from a primary tuberculous focus of the lung itself; it is, as a rule, a part of general tubercular disease.

(To be continued.)

* See, in connection with this, the excellent studies of William H. Mercur, from the pathological laboratory of the University of Pennsylvania, published only in abstract form in the *Phila. Med. Times*, July, 1883.

RUPTURE OF THE UTERUS DURING LABOR, WITH AUTOPSY.

BY C. W. DE LANNOY, M.D.,

Chester, Pennsylvania.

THROUGH the kindness of my friend and colleague Dr. J. L. Forwood, I assisted at the following autopsy, and obtained the history of this interesting case.

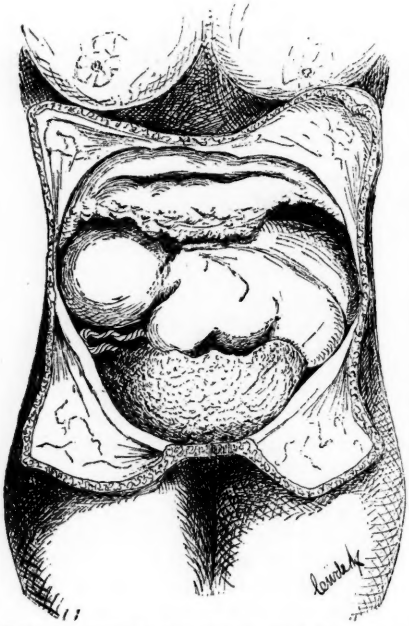
Mrs. X., an Irishwoman, about 43 years of age, who had been previously delivered without trouble of several healthy children, sent for him to attend her in labor. When he reached her house the labor had been in progress several hours, and at the time firm and periodical contractions indicated that the uterus was normally active and promised speedy expulsion of its contents. A digital examination, which was made immediately, revealed a breech presentation, with only partial dilatation of the os. No pressing interference being deemed necessary, the patient was made as comfortable as possible, and, under the continuance of active uterine contractions, dilatation of the neck was waited for. At the end of four hours from the beginning of labor the os seemed to be sufficiently open to admit the presenting part, but the latter had not as yet engaged in the superior strait. Suddenly, on the occurrence of a pain, the face of the woman assumed an anxious expression, the countenance indicating impending dissolution, and as the hand was passed into the vagina a foot was felt to recede, as if drawn up by powerful suction. No external hemorrhage took place, and, although periodical uterine or possibly purely abdominal contractions continued, she perished within half an hour after the accident.

Autopsy.—The body was that of an unusually fleshy woman, with an enormously tumid abdomen. Percussion elicited a marked impression of solidity, but afforded no signs of a double pregnancy; the greatest abdominal diameter was from side to side, and the protrusion of the lateral regions was extraordinary. Making the prescribed crucial incisions, we found the abdominal walls unduly thin, and devoid of adipose, so abundant elsewhere. The child, with its back to the front and head to the right, occupied the entire transverse diameter of the abdomen (see Fig. 1), the left posterior axillary terminus falling beneath the umbilicus of the mother; the right side of the fœtal head and back were covered by the

omentum, and the buttocks were thrust into the upper part of the left maternal groin. Below the fœtus, and between it and the symphysis pubis, was the placenta, occupying a central position, with its maternal surface in contact with the parietal peritoneum. The umbilical cord was visible between the left ear of the fœtus and the upper placental margin. After taking the sketch (Fig. 1), we removed the placenta and fœtus, throwing up the omentum and transverse colon, which partially covered the latter. The concave fœtal surface of the placenta fitted like a cap over the fundus of the womb, which was in a position of extreme anteflexion and slightly inclined to the right; then, dragging the buttocks of the child from the left iliac fossa, we found the feet still buried in the large peritoneal laceration represented (Fig. 2). The small intestines were all crowded up into the right hypochondrium, apparently retained there by the fœtal head; they contained little or no gas, far less than is ordinarily met with in average autopsies. The abdomen contained about one quart of blood, with but few clots, of small size. The pelvic diameters were normal, with a slightly exaggerated sacral prominence.

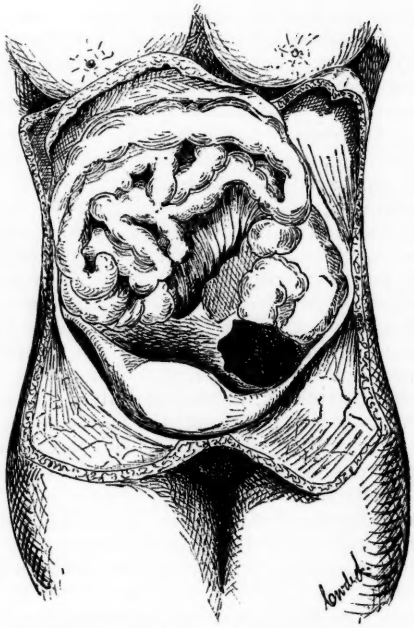
It must be assumed in this case that rupture of the cervico-uterine walls was the result of combined causes. The fœtus was extremely large, and must have weighed fourteen or fifteen pounds; it had evidently expired some days previous to the onset of labor; at least the advanced stage of putrefaction in which we found it could not be otherwise accounted for. We might reason from the above premises that a large, dense mass, exercising great pressure upon a disproportionately thin-walled cavity, would alone exert influences tending towards rupture; but when, in addition, we have the evil effects of putrefaction, which would bring about softening of the mucous membrane and muscular fibre of the womb, the probabilities of so serious an accident would become imminent. The transverse position of the fœtus would lead one to infer that it had escaped into the peritoneal cavity head-foremost; and such was my opinion previous to consideration of the facts incident to her labor. The breech presented at the mouth of the womb, and a foot was felt in the vagina

FIG. 1.



Position of fœtus and placenta after rupture of the uterus.

FIG. 2.



Peritoneal laceration. Case of rupture of the uterus.

immediately after rupture was supposed to have taken place. The rent in the walls of the womb was situated at the junction of neck and body, involving both of these parts. The fœtal head at the time of rupture still occupied the fundus of the womb, and could not have found egress through an opening situated low down at the brim of the pelvis. It will be further noticed, by referring to Fig. 2, that while it is in the course of nature for the uterus to contract down after voidance of its contents, per vaginam or otherwise, we have in this case an unusually marked disproportion between the sizes of fœtus and contracted uterine tissue. The inference is that, like the abdominal parietes, the uterine walls were unusually thin, and, although the peritoneal rent seems small, it was no doubt a large one before its outline had narrowed down in obedience to uterine contraction. Further, the position of the fœtus in its extra-uterine habitat may have been influenced, determined, or even radically changed by the periodical contractions of the abdominal muscles subsequent to the rupture: this latter phenomenon was maintained for half an hour, the time which elapsed between the supposed occurrence of rupture and a fatal issue.

To sum up the etiological value of both clinical history and post-mortem appearances, it would seem that in this case the obstacles opposing the escape of the fœtus from the cavity of the uterus were, first, the walls of that cavity, and, in the second place, the ordinary resistance of the uterine neck previous to complete dilatation; of the two the former proved least difficult to overcome, and hence delivery by other than *per vias naturales*.

October 10, 1883.

HOT WATER—AN OLD REMEDY REVIVED.

BY W. THORNTON PARKER, M.D.

SO much attention has been given of late to the use of hot water as a remedy of the first importance in many diseases that I believe a few remarks on this subject may be advisable.

The number of diseases and of injuries which can be successfully treated with hot water is very much greater than most people seem to be aware of. I have under observation at present some very interesting cases where the treatment by hot water seems to be succeeding remarkably well. I refer to the internal or "therapeutic" use of hot water. There is, of course, great difference between using this remedy after the manner recommended by Dr. Salisbury and taking a gobletful occasionally. The use of hot water as a remedy in serious disorders must be employed systematically and perseveringly.

After severe mental or bodily labor, where a sense of exhaustion is experienced, the use of hot water is likely to afford an immediate sensation of relief, increased strength, and even exhilaration. Unlike the effects of alcoholic stimulants, this improvement continues for a long time; the appetite is stimulated, a general improvement actually taking place. The use of hot water immediately before meals is not the course recommended by Salisbury, although it is undoubtedly desirable for many and does act as a tonic of no little value. It is well known that in early colonial times, and indeed until quite recently, the custom of serving at meals hot water for "sipping" was quite general and very highly approved of in our best society. It is not improbable that, in view of the high authorities recommending hot water, and the very remarkable cures attending its use at the present time, we may have a revival of this time-honored custom.

Nearly fifty years ago there appeared in England a collection of essays, by Thomas Walker, M.A., called "The Original." In 1875, Dr. Guy published a revised edition of "Walker's Original,"* and from "The Arts of Life," part ii. page 94, I will quote from Walker's essay on "Hot Water," and Dr. Guy's note on the same:

"Having said much about wine, I will not omit all praise of hot water, the efficacy of which on many occasions in life is very great and cannot be too generally known. I will begin with a remarkable cure effected by it on myself. Many years ago, when I was laboring under what I supposed to be an attack of common sore throat, I rode some miles on horseback, with a north wind in my face. I then got into the mail, and travelled nearly two hundred miles, and at the end of my journey I could scarcely speak or swallow. In the morning I was still worse, and on attempting to force down a little coffee I

* The Original. Fifth Edition. Dr. Guy. London: Henry Renshaw.

found it utterly impossible. In this extremity, a physician, now among the most eminent of his profession, called upon me, partly through accident. He told me I had got a very bad quinsy, and he immediately ordered a kettle of hot water, recommending me to gargle with it as hot as I could bear, and continually. As we were on intimate terms, and he was then only commencing practice, he remained with me two or three hours to enforce his prescription. I found so much benefit that after he was gone I persevered till night, at which time I was enabled to take food without difficulty, and in the morning there was no trace whatever of the attack, nor have I ever experienced another, though I was told it would most probably be the case. The medicine ordered me I did not taste, and the sole glory of my rapid and complete cure is due to the hot water. I have never had even a common sore throat since, or I should certainly try the same remedy, though I never heard of its being so applied."

Dr. Guy's note is as follows: "This is a good example of the fallacy of many popular opinions on medical matters. From the author's description of his attack, it is obvious that the quinsy had arrived at that stage at which the only possible relief is by a discharge of matter. Hot water could have no curative effect in such a case; but, through a happy coincidence, art earned the credit due to nature."

This statement by Walker, made so long ago, although severely rebuked by such eminent authority as Prof. Guy, is, after all, correct in practice. I have repeatedly treated cases of quinsy, entirely depending on hot water from first to last. I would recommend the use of hot water not only as a gargle, but taken in the manner recommended by Dr. J. H. Salisbury and Dr. Ephraim Cutter, which I will refer to again before closing this article. During the past summer three cases were treated successfully by this method, and I am sure would generally be found successful. Walker also recommends hot water in bruises, which he considered "most efficacious, both by means of immersion and fomentation, in removing pain and totally preventing discoloration and stiffness. It has the same effect after a blow. It should be applied as quickly as possible, and as hot as can be borne." He also recommends immersion in hot water for the finger suffering with whitlow, and this is certainly good treatment to-day. Where the fingers have been crushed in shutting a drawer or a door, he considers hot-water treatment better than anything else. "*The efficacy of hot water in preventing the ill effects of fatigue is too well known to require notice.*" In the *Lancet* for November 24, 1883, Dr. Jackson reports some cases of gout and gravel relieved by using hot water as recommended by Cutter in the *Lancet* of September 15, 1883.*

It is, however, in phthisis that the hot-water treatment exhibits its remarkable value, and Salisbury's treatment must sooner or later win the good reputation it certainly deserves. In the treatment of dyspepsia and of constipation it has already won considerable fame. Its uses in gynæcology are too well known to need any quotation, and Prof. Hamilton has employed it with excellent success in surgery.

Prof. Hamilton remarks,† "No treatment hitherto adopted under our observation has been attended with equally favorable results." It is *hot* water, and not warm water, which is recommended, of a temperature from 110° upwards to 150° Fahrenheit,—one or two gobletfuls, taken *gradually*, one hour or longer before meals; although half a gobletful may be taken directly before eating, by "sipping," as in the old fashion referred to. It is a very good plan to take hot water before going to bed, also after a long ride or walk and before bathing. Within ten days after commencing the hot-water treatment the good effects are noticed by the improvement in the general condition of the patient. "The sweat starts freely after drinking, giving a true bath from centre of body to periphery." "The skin becomes healthy in feel and looks." "The digestion is correspondingly improved, and with this improvement comes a better working of the machine."‡

Dr. Cutter makes the following claims for the hot-water treatment:

"(*a*) Foundation for all treatment of chronic diseases.

"(*b*) Excites downward peristalsis.

"(*c*) Relieves spasm or colic of the bowels by applying the relaxing influence of heat inside the alimentary canal.

* I can also recommend it highly in cystitis, gonorrhœa, and prostatitis.—W. T. P.

† Quoted by Bartholow, Mat. Med., 4th edit., p. 66, et seq.

‡ The Therapeutical Drinking of Hot Water. Dr. Ephraim Cutter.

"(*d*) Dilutes the ropy secretions of the whole body, and renders them less adhesive, sticky, and tenacious.

"(*f*) Dissolves the abnormal crystalline substances that may be in the blood and urine.

"(*h*) Use it to wash down the bile, slime, yeast, and waste, and have stomach fresh and clean for eating.

"(*l*) Promotes elimination everywhere."

Dr. Cutter strongly sustains the Salisbury theory of practice with hot water, and, without accepting all the claims made for this excellent old remedy, it must certainly be acknowledged that it has many advocates in this and other countries, and is a very popular as well as a very reliable therapeutic agent, and it also has the advantage of being very accessible and inexpensive. "There is nothing new under the sun!"

Certainly, it is no news to inform the medical profession that the débris and other contents of the stomach and bowels may be washed away and digestion facilitated by the use of copious draughts of hot water. It should be remembered, also, that serious injury may be done the mucous membrane and the secretory organs by a reckless use of this remedy.

Like all other therapeutics, the supervision of a medical man is needed, and without counsel no one should adopt this new treatment. As with many other excellent remedies, there is danger that too much may be attempted, and, from the inevitable injury resulting, a verdict of failure be given for the whole plan.

MOORESTOWN, N.J., December, 1883.

REMARKS UPON NIGHTMARE.

BY GEORGE HAMILTON, M.D.

FOR the first time within the recollection of the writer, an article upon this affection, or rather upon a complication of it with epileptic symptoms, appeared in one of our medical journals,—from the pen of Prof. H. C. Wood, in the *Medical Times* of December 1, 1883. In this paper Dr. Wood declares that "nightmare, as it usually occurs, is not of much moment;" and, so far as relates to the infrequency of a fatal issue, this is true, and hence, in part, the neglect to which it seems doomed by medical writers and lecturers. But may we not greatly err in regard to its fatality? Of the numerous instances where persons, apparently in good health, retire to rest at night, and yet are found dead in the morning, how many of them, or how few, have succumbed to attacks of nightmare, it is wellnigh impossible to determine. The almost invariable custom, in such cases, is to give a certificate or render a verdict of apoplexy or disease of the heart,—whether there has been an examination of the cadaver or not. Now, it is generally admitted that, whatever may be the exciting or the proximate cause of nightmare, it is the vascular system, and notably the heart and brain, that are most involved in this affection, so that in this malady a post-mortem would probably exhibit appearances not very dissimilar.

As a case, in illustration, formed the basis of the paper of Prof. Wood, so in the present instance his example will be followed; it is not the purpose of the writer to treat of the subject generally, for with the usual phenomena of nightmare a large proportion of people are more or less familiar. The case to which allusion will now be made is, in the writer's experience, an exceptional one, if not in character, at least in severity, and is as follows:

A gentleman, far beyond middle age, had been in the earlier part of his life subject to repeated attacks of nightmare in its ordinary form, caused, as usual, by dreams of a terrifying character,—such as falling from elevated positions, attacks of wild beasts or savage dogs, or being waylaid in solitary places by men bent upon robbery or murder, etc. Not infrequently he would find himself in a vast amphitheatre,—the Colosseum, for instance,—witnessing the furious combats of gladiators or wild beasts, or the desperate struggles of men and horses for victory in the chariot-races,—during which, especially at the moment of victory, the shouts of tens of thousands would break forth with such astounding, unearthly violence that the terror of our subject, already beyond conception, would reach its ultimatum by the crashing down of the vast structure, burying everything beneath, and accompanied with a noise so fearful that all creation seemed rushing into general ruin. Scenes of this peculiar kind were to him far more frightful than those produced by ordinary agencies. The oppression of the chest and attendant sense of suffocation, usually felt, were nearly absent in this case, and he was, as often happens, unable to cry out or utter a word during the fit, but the moment this was over he regained the power of speech and the use of his limbs. Attacks of this sort, recurring at longer or

shorter intervals, continued up to his twentieth year, and did not return, unless at very remote intervals, till about his sixtieth year. From this period on, through many years, the attacks would not be ushered in from terror of wild beasts pursuing him, or from falling from great heights, etc., but would nearly always occur through the agency of human beings. He would hear one or more persons trying to enter his residence, or, having gained entrance, endeavoring stealthily, almost noiselessly, to gain admission to his chamber; or, more alarming yet, would perceive that they had already entered the room and were cautiously approaching his bed. In these attacks, as in those of earlier years, he suffered very little from oppression or sense of suffocation, and it was only after several years that he was able to utter a word even imperfectly, or cry out, and this noise would in some cases serve to awaken him; but generally he could only be aroused by the persistent efforts of his wife in endeavoring to change his posture, or calling aloud to him. But here we have the great distinction between the phenomena of his early life and those of his advanced years, for, as above stated, the moment the attack of his youth was over he could at once converse as well as ever, and assume whatever position or posture he preferred. On the contrary, in very many of the attacks of his later years, and this, too, even after being aroused from sleep, and conscious, too, of whatever was said or done, he would nearly always remain for a short time passive, having no power to move his limbs, nor could he speak so as to be understood for a much longer time, lasting on some occasions more than half an hour, and whilst in this condition his speech was precisely similar to that of paralysis, which, in fact, for the time being it was. In this connection it must be stated, as an important factor in reference to the pathology of the case, that, as a rule, so soon as he awoke he noticed that a more or less partial erection existed, without the slightest thought, however, or feeling of sensual character.

Prof. Wood refers in his paper to his paralyzed condition, and the horrible suffering, so intense in fact that although lasting but a few seconds it was conceived to be of almost infinite duration. This feature, then, in the single experience of Dr. Wood, is but the counterpart of what occurred in many of the attacks endured by the patient now presented. In fact, when asked to define the nature of this suffering, he would reply, "That is impossible," adding, "that all the terrors of his early experience could not be compared with the suffering of the later attacks;" and yet he was not conscious of physical pain of any sort, nor, as said before, of oppression or sense of suffocation. Of fright or fear of death he had no thought, for the suffering, although indescribable as to character, was so inconceivably intense that instant relief was the only thing thought of, if indeed any rational conception at the moment were possible.

To endeavor to explain the extraordinary vagaries of nightmare, in reference to its physical causation, would be to attempt the impossible, whilst it is not beyond our province to seek an explanation of the phenomena just stated to certain pathological conditions. The generally accepted opinion that persons having enlargement of the heart or valvular affection are more disposed to nightmare than others is probably well founded. That such persons are subject to congestion of the heart, of passive character, must be admitted; and it is not unlikely that a large proportion of such cases as usually occur are due to this cause. But attacks complicated with paralysis cannot be thus explained; and as congestion of the heart cannot long continue without implicating the brain and upper portion of the spinal marrow in a similar way, the occurrence of the paralysis may thus be explained. It is well known that erection, complete or partial, has often been observed in case of execution by hanging, and here congestion must of necessity take place, and this incident would seem to show a relationship with what occurred in the individual referred to above.

In regard to the exciting causes of nightmare, irregularity and excesses in eating, drinking, or sensual indulgence, are, doubtless, deservedly placed among the more prominent. A rich, abundant, and late supper has justly been regarded as the cause of many attacks; but the patient referred to informed the writer that if he retired to rest with a void sensation from want of food he was much more likely to have an attack than if he had previously eaten a moderate portion of rather rich food; and this is unquestionably the fact in general experience. Mental agitation, even joyous, if in excess, depression or worry from any cause, are well-known agents in the production of this affection. For the prevention of nightmare many were the proposed remedies, material or magical, of the olden times; and whilst medicines of anodyne or antispasmodic nature have sometimes

appeared to forestall these attacks, it is now generally admitted that the avoidance of all noxious agents, temperance in the manner of living, and, so far as possible, control of the intellectual, moral, and emotional nature, will prove the most useful in guarding against attacks of this most frightful and, as it may well be feared, too often fatal malady.

1600 SUMMER STREET, PHILADELPHIA.

REPORT ON LARYNGOLOGY AND DISEASES OF THE NOSE.

BY DR. CARL SEILER,

Instructor in Laryngology at the University of Pennsylvania, Lecturer on Diseases of the Throat and Nose in the University Post-Graduate Course, etc.

CYSTIC POLYPI IN THE UPPER AIR-PASSAGES.

IN a late number of the *Medical News* an article appeared by Dr. Lefferts on a case of cystic tumor situated in the posterior nasal chamber, which was not recognized as such by him at the rhinoscopic examination, and he was only made aware of the nature of the growth by the copious discharge of serum and the small amount of tissue brought away by the forceps. These cases are very rare, and besides the one recorded by Dr. Lefferts one other case only is reported in the literature on the subject. It has, however, been my good fortune to meet with four such cases, and in the second edition of my book I mention the existence of these cystic polypi. The last case I saw was interesting from the fact that the patient had previously suffered from fibrous polypi, and I will therefore give a condensed history of her case.

Mary H., a native of Virginia, presented herself two years ago at the dispensary for treatment. She said that, a year previously, her physician at home had removed several pieces of a tumor from her post-nasal cavity, but she had not been able to breathe freely through her nose after the operation, and that now she could not draw any air through the organ. On examination with the rhinoscope and with the fingers, I discovered a very large fibrous polypus filling the naso-pharyngeal cavity and extending into the right anterior nasal cavity, filling it completely. After several unsuccessful attempts I succeeded in getting a wire loop around the growth and removing it in its entirety. An examination after its removal showed the polypus to have been attached to the posterior edge of the vomer. The patient was kept under observation for several months, and as there was no return of the growth she was dismissed as cured. A few weeks ago she again presented herself, saying the tumor had come back. On examination I saw a large polypus filling the right nostril, apparently springing from the posterior portion of the middle turbinated bone. The wire snare was introduced, but repeatedly slipped off, and, getting impatient, I resorted to the forceps. A very slight pull brought a large quantity of yellowish serum, which gushed out of the nostril. This made me aware of the nature of the growth, and, after removing the forceps, I saw, in the rhinoscopic mirror, the sac hanging from the middle turbinated bone. This was easily removed with the forceps, and after the hemorrhage had ceased and the parts had been washed I discovered quite a large polypus springing from the upper portion of the nasal cavity. This was easily engaged in the snare and removed, and proved on examination to be a fibrous polypus, the lower portion of which had undergone cystic change; there being a cyst the size of a small cherry.

IMPROVEMENTS IN LARYNGOSCOPIC APPLIANCES.

Among the improvements in instruments for the treatment of nasal diseases must be mentioned two changes made in the wire-snare originally introduced by Dr. Jarvis, of New York. One is the application of the instrument to the requirements of galvano-cautery by substituting platinum wire for the steel wire, and suitable attachments for the battery, by Dr. Jarvis himself; and a change made by Dr. Sajous, of this city, which consists in the substitution of a slender rod with an eye at the end for the long wire, which enables the operator to use small pieces of wire to form the loop and saves the trouble of fastening the ends. The instrument, however, loses thereby much of its lightness and delicacy, and it is a question whether the change is an improvement.

The last number of the *Archives of Laryngology* is replete with interesting articles, among which the one by Dr. French, of Brooklyn, on "Photographing the Laryngeal Image," is of peculiar interest, on account of the progress which he has made

in this difficult procedure. Ever since the laryngoscope has been in use a number of experimenters have attempted to reproduce the laryngeal image by means of photography, in order to obtain a picture which should be more satisfactory than a drawing, and should come nearer the truth than the conventional pictures seen in books on the subject. But none have attained the desired end except Dr. French and Dr. Lenox Browne, of London, who recently sent some excellent photographs of the living larynx to this country. But good as they are and true to nature, they also present the same outline as the drawings and lack the depth and perspective which make the image seen in the mirror so much more satisfactory. And I do not think it is possible to reproduce this perspective, except, perhaps, by making a stereoscopic picture and viewing it through a stereoscope, for only then can we expect to obtain a reproduction of the roundness and reality of the image. However, Dr. French and Dr. Browne have given us pictures which far surpass even the fondest hopes of the earlier experimenters, myself included, and open up a possibility that photography may become an important aid in the art of laryngoscopy.

As a curiosity in the literature of laryngology the following abstract from the *Therapeutic Gazette* deserves to be mentioned. Dr. Th. Dimmock, of New York, under the heading "A Novel Laryngoscope," gives the following directions for seeing the larynx without a mirror:

"Bring the patient near a good light of any kind, and after the mouth has been opened, place on the tongue a depressor; then request the patient to yawn. The larynx will immediately rise, and every part *necessary to be seen* will be brought fully into view." Quod erat demonstrandum. Had we not better throw our costly and cumbersome instruments away and, armed only with a tongue-depressor, go forth and study laryngoscopy? What a pity Dr. Dimmock did not precede Garcia and Czermak with his discovery! But perhaps what he thinks is necessary to be seen is only the tip of the epiglottis, and we had better pause in our mad career and retain the mirrors and other appliances so as to look a little lower down into the laryngeal cavity proper. It is true there are a number of cases in which the epiglottis is erect, and its upper portion can readily be seen by depressing the tongue, especially when gagging sets in, but very little is gained from such a view, and intra-laryngeal disease cannot be diagnosticated nor treated without the laryngeal mirror.

TREATMENT OF TONSILLITIS.

The treatment of tonsillitis has of late been largely ventilated in the medical journals of this country and also in those abroad, and various remedies have been praised as specifics in this painful, and often recurrent, throat affection. Thus, for instance, a correspondent of the *Medical News* treats tonsillitis by the application of bicarbonate of soda, and claims that seldom are more than three applications of the dry drug necessary to cure even severe cases. There is no doubt that a mild alkali, such as the bicarbonate of sodium, is very soothing when applied to inflamed surfaces, and it is used largely in the treatment of burns on the skin, but in my experience it has failed to be more than a soothing application, and in spite of it many cases go on to suppuration. The same is true of the application of the gum-resins so highly recommended some time ago in this affection. I have not found anything better than a strong solution of nitrate of silver, sixty to one hundred and twenty grains to the ounce, applied with a brush to the inflamed glands; and, if the remedy is resorted to early in the disease, the symptoms almost invariably subside within a few hours. If, however, the inflammation has lasted for a day or two, the silver-solution will not abort the attack, but it will in most instances prevent suppuration. It is curious to observe with what regularity in some persons the tonsillitis recurs during the winter months, and I have seen a number of cases in which a tonsillitis occurred regularly every six weeks. In these instances it is best to remove the glands, which are always more or less hypertrophied after an attack has passed off, either with the tonsillotome or, if the gland be too small to be grasped by the annular knife of the instrument, by a few incisions with the galvano-cautery knife.

It is a gratifying result of the investigations of earnest workers in laryngology that very little is nowadays said or written about pharyngitis in its various phases.

This affection but a few years ago was looked upon by the practitioner as the ready explanation of almost all throat troubles, and was accordingly treated vigorously with probang and brush; while now it is known to be in most instances merely a symptom either of nasal catarrh or of gastric irritation, and will disappear with the removal of the cause without any direct local treatment.

In conclusion, I will briefly relate a case which illustrates the above remarks in a striking manner. A young lady came to me to be treated for a constant dryness and tickling in the throat, which had lasted for several years and had resisted the vigorous treatment with the whole list of astringents applied to the pharyngeal wall. An examination revealed the pharynx to be studded with enlarged follicles, which were red and irritated. The larynx was normal; but in the naso-pharyngeal cavity I discovered two very large posterior hypertrophies, springing from the posterior ends of the middle turbinated bone on either side. These I removed in succession with the wire-snare at an interval of a week, and two weeks after the second hypertrophy had been removed the pharynx appeared normal, and all symptoms of the former trouble had disappeared. No applications of any kind had been made during the time of treatment.

1346 SPRUCE STREET.

NOTES OF HOSPITAL PRACTICE.

CLINIC OF LOUIS A. DUHRING, M.D., PROFESSOR OF DISEASES OF THE SKIN IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by HENRY WILE, M.D.

THREE CASES OF SCABIES.

THREE boys of the same family, aged respectively 10, 8, and 6 years, exhibit, in various degrees of intensity, a marked eruption, especially on the hands, arms, neck, abdomen, genitals, and buttocks. The duration of the disease has been from eight to ten weeks, and the eminent characteristic of the lesions is their multiformity. They consist of points, papules, vesico-papules, and here and there a pustule. In addition to these are excoriations and crusts. In this disease lesions soon occupy very nearly the whole surface of the body, with a predilection for certain regions as the interdigital spaces, the flexor surfaces of the arms, the penis of the male, the breasts of the female, and the buttocks. Their multiformity and distribution give the key to the diagnosis, and we have here three cases of scabies, or itch. Itching is a constant symptom, being especially annoying at night when the patient is in bed. The disease is eminently contagious, and is produced by the presence of the itch mite, called sarcoptes scabiei, an animal parasite. It moves between the layers of the epidermis and in the rete Malpighii, feeding upon the juices of the skin, and as it moves along it lays its eggs, and after a short time the characteristic burrow is produced. In these cases we have any number of such well-marked burrows. They vary from a line to a quarter-inch in length, being often discolored by foreign matter gaining entrance or being rubbed in, and at the end of the burrow is a point representing the seat of the mite. Scabies is comparatively rare in Philadelphia, but is more common in seaport towns. The treatment is at once simple and satisfactory, consisting in the use of some parasiticide, and among the best are the sulphur preparations. Here we will direct the following:

℞ Sulphur. præcipitat.,
Balsam. Peruviani, āā ʒi;
Adipis, ʒi.
M. Ft. ungt.

Sig.—To be well rubbed into the entire surface of the body twice daily.

ALOPECIA AREATA.

A married woman, 33 years of age, presents on the scalp an anomalous condition in various stages of development. About two years ago, according to the statement of the patient, twenty-two bald patches suddenly made their appearance, which is evidence that the disease came on insidiously and had existed some time before it was recognized. At present there are smooth, entirely bald patches, varying in size from a dime to a silver dollar, scattered over the scalp, also some patches covered with a growth of fine whitish silky lanugo, with here and there a scant amount of short black hair, which is all that remains of the original growth. The affection as it here exists is disfiguring, but it is already on the road to recovery, and in several months or a year the hairs will probably all return in their full vigor.

In some cases, however, the disease may continue five, ten, or twenty years, going through various changes, full recovery never taking place. As regards the prognosis, the older the patient the less favorable it is, and the younger the person the more favorable. It very seldom happens that the hair does not return in young persons. The prognosis should, however, always be guarded. It is a disease of the hairy system, affecting not only that of the scalp, but also that of the eyebrows and eyelashes and other parts of the body. It is produced by faulty nutrition and insufficient nerve-force. Some authorities assert that it is of parasitic origin; but the microscope shows no specific fungus. It belongs to the same class of diseases as vitiligo (in which there is an abnormality regarding the deposit of pigment), and often follows mental strain or shock. Internal treatment alone is followed by beneficial results, and arsenic is the agent that cures the majority of cases. It is the only remedy that seems to have a positive effect. Local stimulating applications have no great value,—at least until the hair begins to grow again. The arsenic may be given in the form of arsenious acid, one-fortieth to one-thirtieth of a grain at a dose, using small rather than large doses. Where the hairs are beginning to grow, we may use some stimulating local measures; and in the present case an ointment composed of equal parts of tar and cosmoline will be ordered.

SYPHILODERMA TUBERCULOSUM (OF THE SOLE OF THE FOOT).

A woman, 70 years of age, has a disease affecting the sole of her left foot, and it first appeared about two months ago. At present there is in the centre of the sole of the foot an irregular, palm-sized lesion, consisting of variously sized ulcers, about one-quarter of an inch deep, the surface secreting a yellowish, puriform fluid, and very painful to the touch. Outside of this large lesion are several smaller ulcers scattered about. The whole is somewhat concentric, and possesses all the characteristics of a late tubercular syphiloderm.

These lesions affecting the soles of the feet are difficult to treat, on account of the position. In the first place, the patient will be ordered to bathe the foot in hot water until all the horny epidermis comes away; then the following ointment will be applied:

℞ Hydrargyri ammoniati, ʒss;
Adipis, ʒiv;
Cerat. res. co., ʒiv.—M.
Ft. ungt.
Sig.—Apply on small pieces of cloth.

Internally the iodide of potassium will be administered in ten-grain doses three times daily.

HERPES ZOSTER.

A man, about 45 years of age, has a typical acute eruption occupying one-half the body, extending in the shape of a band three inches wide from the spinal column to the umbilicus. The eruption is characterized by groups of vesicles, some smaller, some larger, the average being about the size of a split-pea. Some of the lesions are round, others elongated; some are discrete, while others have coalesced, forming small blebs. The primary lesion is a vesicle surrounded by an inflammatory areola. The color is a pinkish, reddish, bluish tint, and not a bright red.

We have here a typical case of herpes zoster, commonly known as "shingles." It cannot be confounded with any other disease. The eruption of the vesicles is usually preceded by pain or uneasiness in the part, and where there is a persistent unilateral pain this disease may be suspected. The pain varies and is often slight. The eruption is herpetic, in that there are vesicles and that they are grouped. There is no herpes without grouping of the lesions. The eruption is now at its height, and the lesions are already becoming flattened. The contents may be serous, bloody, or pustular, and in severe cases the lesions may leave scars, especially when occurring about the orbit; it may then be accompanied by loss of the eye. The disease may attack any part of the body, but it always occurs in the line of the nerves, and especially along the track of the dorso-abdominalis or dorso-pectoralis. It is generally unilateral, only in very rare cases are both sides of the body affected. As a rule, it attacks an individual once in a lifetime. It runs an acute course in from two to four weeks ordinarily, passing off spontaneously.

The disease is due to an inflammation of the nerves, either the terminal endings or the trunks being affected. The course

of the disease is little influenced by treatment. In some cases the phosphide of zinc, given in pill form, one-fourth to one-tenth of a grain repeated every two or three hours, is of benefit. The best form of treatment, and that which affords the most relief, is with the galvanic current, the negative being passed over the lesions. Locally, powders of lycopodium and starch may be used; but among the best applications are lotions of the fluid extract of grindelia robusta, one drachm to the ounce or two of water, or the compound sulphide of zinc lotion, composed as follows:

R Zinci sulphatis,
Potass. sulphuret., āā ʒi;
Glycerin, fʒi;
Aquæ fʒiv.—M.

Sig.—Apply three or four times a day.

A lotion of sulphate of zinc, about five grains to the ounce, may also be used.

ECZEMA PUSTULOSUM.

A boy, 5 years old, of a blond complexion, presents an eruption occupying the entire scalp. It is characterized by bright-yellow, sulphur-colored crusts and the presence here and there of bald patches. The disease has existed six months, and is a typical example of pustular eczema. Occurring on the head and where there is so much crusting as here, it is liable to be confounded with tinea favosa, yet the points of differential diagnosis are many and plain. In the first place, the crusts are peculiar to eczema, and bear no resemblance to the characteristic cup-shaped crusts of favus; then the bald patches are covered with abundant young hairs and contain no broken-off hairs; then, again, there is an absence of the peculiar mousey odor of favus. Besides this, the disease is extending down the sides of the face and on the backs of the ears, and also involves the eyelids.

There is no reason why this disease should prove obstinate, as it is usually amenable to proper treatment, and a cure may be effected in from four to eight weeks. The treatment will first consist of local applications of olive-oil allowed to remain on over-night, and in the morning washed off with hot water and soap. By this means the adherent crusts are readily and effectually removed. After the crusts are completely removed, an ointment of ammoniated mercury, twenty grains to the ounce of lard, will be applied twice a day, fifteen minutes at a time. Internally, cod-liver oil will be ordered. When we see our patient next week, there will without doubt be a change for the better.

TRANSLATIONS.

Septic Pneumonia in Infants.—Dr. Oscar Silbermann draws the following conclusions from an analysis of twelve cases of septic pneumonia occurring in infants:

1. The septic pneumonia of the new-born and infants always originates with a tracheo-bronchitis, and is to be regarded as a catarrhal pneumonia, in many cases due to the presence of a foreign body.

2. It may be produced by inhalation of decomposed amniotic fluid or genital secretions, or through inhalation of infected air in cases of septic infection of the mother.

3. The septic pneumonia of the new-born frequently originates with disease of the pleura, but seldom with disease of other organs, in contradistinction to other septic processes in infants, which are usually associated with multiple points of origin.

4. The alveoli and bronchi of children dying from septic pneumonia are always filled with masses of bacteria.

5. The blood in cases of septic pneumonia in infants shows a great increase in the white corpuscles, with breaking down and solution of the red blood-disks.

6. Jaundice is a constant accompaniment of this disease.

7. The disease usually originates from one to two days after delivery.

8. The disease is always fatal, usually on the third or fourth day after birth.

9. The access of septic material to the lungs in the new-born is favored by insufficient closure of the glottis, and by the shortness of the main bronchi.

10. The wide distribution of the septic process in the lungs is due to active epithelial desquamation and the narrowness of the finest bronchi, as well as the feeble muscular apparatus of the respiratory organs of the new-born child.—*Deutsches Arch. f. Klin. Med.*, December 12, 1883. S.

Enteritis in Hereditary Syphilis.—Mracek describes the anatomical alteration of the intestine which he observed in six

cases of hereditary syphilis in infants. Such anatomical changes may be either diffuse, when the inflammatory process involves the entire intestine or extends over a large portion of it, or circumscribed, as in other typical syphilitic affections: in the latter case the upper portion of the jejunum is especially affected. Two forms may be differentiated,—one of infiltration confined to the intestinal patches, the other of irregular tubercles situated in the submucosa, and of about the size of a pea. Both forms are liable to ulceration, which may be distinguished from other forms of intestinal ulceration by the fatty character of their bases and their indurated, punched-out edges. Microscopic examination shows that the process starts as a round-cellular infiltration in the walls of the finest arterial vessels, obstructing their calibre and resulting in an anæmic necrosis. In the diffuse variety the inflammatory process is principally located in the mucous membrane, and leads to fatty degeneration and desquamation of the epithelium.

This affection may explain why children of syphilitic mothers so frequently suffer from severe uncontrollable intestinal catarrh.—*Centralb. f. d. Med. Wissen.*, December 13, 1883. S.

THE SITE OF THE CARDIAC IMPULSE.—Dr. S. Eulan makes the following statements as to the relation existing between the position of the heart's impulse and the line of the nipple.

In the recumbent position the impulse of the normal heart never extends over that portion of the fifth intercostal space lying between the clavicular and parasternal lines.

If, instead of being within, the heart-shock lies without the left clavicular line on the level of the fifth intercostal space, the heart has either been displaced or abnormally enlarged.

In cases where the cardiac impulse is felt in the fourth intercostal space, especially in children and females, a moderate extension of the impulse over the clavicular line must not necessarily be attributed to pathological processes unless some other signs of disease are present.—*Deutsches Arch. f. Klin. Med.*, December 12, 1883. S.

TEST FOR IMPURITY OF IODOFORM.—The examination of iodoform for impurities is conducted, according to the method of Agema, as follows. Iodoform is shaken with distilled water, and the solution filtered, and to it is added an alcoholic solution of silver nitrate (lunar caustic). The mixture is now set aside for twenty-four hours. Should foreign substances be present in the water, there will be a black precipitate of reduced silver in proportion with the amount of the impurity. Pure iodoform will give by this test only a faint grayish cloud upon the bottom of the glass. All the preparations which had caused toxic symptoms gave a precipitate when tested by this method.—*Centralblatt für Chirurgie*, No. 48, p. 770.

THE RELATIONSHIP OF MALIGNANT DISEASE TO THE FOOD AND ITS TREATMENT BY DIET.—In a communication to the Académie de Médecine de Bruxelles, M. Van den Corput made a suggestive reference to the etiology of cancer (*Revue de Thérapeutique Med.-Chir.*, January 15). Upon considering the geographical distribution of cancer the author found that it is almost unknown in hot countries, and also among certain religious communities in other latitudes which abstain from the use of meat. The only apparent connection between these two classes is the diet. It is apparently, therefore, to an exaggerated animal diet—which at the same time causes an excess of chloride of sodium in the system—that we must look for the principal pathogenetic cause in the cancerous diathesis. This must reside in an infection of the organism, either by certain nitrogenized products susceptible of disturbing or changing the normal nutrition processes, or by certain inorganic elements, such as the phosphates, capable of favoring the histogenesis of neoplasms. A confirmation of this view was found in the rapid emaciation of the patients, accompanied by the decreased discharge of urates in the urine. The application of these views to the treatment of cancer is obvious, but it does not appear that the author has succeeded as yet in demonstrating the correctness of his views by clinical investigation.

SYPHILIS IN THE MONKEY.—M. Martineau reported to the Société Médicale des Hôpitaux that the monkey which he had inoculated with syphilis several months ago has now a syphilitic inflammation of the vault of the palate.—*Le Progrès Médical*, October 20.

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EDITORIAL.

THE TREATMENT OF SPINAL CARIES AND ABSCESS.

AMONG the latest achievements of the antiseptic method, which in the fields of abdominal and joint disease has revolutionized modern surgery, may be mentioned the treatment of spinal caries by early evacuation of the pus-cavity and the removal of any carious portion of the vertebral bodies that may be found. The usual methods of expectancy, either by complete rest in the recumbent posture, or by the immovable dressings, do not always prevent abscess nor greatly improve the prognosis when the purulent collection points in the psoas region or elsewhere.

"The treatment of spinal abscess," says Prof. Gross, "is altogether unsatisfactory. Generally several months elapse before the true nature of the disease is ascertained, and then its ravages will usually be found to be of such a character as to render all efforts at a cure utterly hopeless." He also states that "if a free dependent outlet could be formed for the matter early in the disease, the probability is that the patient might occasionally get well."*

Mr. Frederick Treves, the author of the section of Malformations and Diseases of the Spine in the International Encyclopædia of Surgery, of Dr. Ashhurst,† in that place insists upon the occurrence of suppuration in every case of Pott's disease, even where recovery takes place without evident abscess, and recommends early evacuation with the aspirator, or, if the overlying integument be quite thin where the abscess points, to make a free incision with antiseptic precautions, and also that the wound shall be dressed antiseptically as long as may be necessary.

In a report recently read by Mr. Treves before the Royal Medical and Chirurgical Society of London, he described a method devised and practised by him for removing fragments of bone and evacuation of the purulent collection. In the proposed operation (as we learn from the *Medical Press*) a vertical incision is first made near the outer edge of the erector spinæ muscle, and the sheath of this and of the quadratus lumborum next cut through. The vertebræ are then reached by incising the psoas and following the structures on to the surface of the bone. Ready examination of the vertebræ is thus rendered possible; and should sequestra exist, their removal is rendered perfectly easy. In the first case, operated upon by Mr. Treves in this manner, the necrosed portion of bone was readily removed, and the patient did very well after the operation. The same result, as far as the operation went, was reported of two other cases; but one of them, a boy, subsequently succumbed to pre-existent disease of the lung and other complications.

Mr. Treves points out that the gravity of caries of the vertebræ depends principally on the depth and inaccessibility of the morbid action and not upon any peculiar pathological features which it possesses. Mr. Bryant, in the discussion, spoke favorably of the operation mainly because it would afford an easy outlet for the pus, rather than on account of the opportunity of removal of the diseased bone, which does not always exist. Mr. Savory, however, questioned the applicability of the operation, since it gives a very inadequate exposure of the parts affected for the removal of bone, and where sequestra do not exist, the operation of a purely exploratory character is not justifiable. Mr. Barwell also called attention to

* System of Surgery, Sixth Edition, Phila., 1882, vol. ii., p. 122.

† The International Encyclopædia of Surgery, vol. iv. New York, 1884.

the fact that removal of a large amount of diseased bone would not be feasible, and the diagnosis would always be a doubtful one as to whether any sequestra really were present.

It is hoped that Mr. Treves's communication will direct professional attention anew to the treatment of a class of cases that too long has been an opprobrium to medicine.

THE AMERICAN ANTI-VIVISECTION ASSOCIATION.

THE first anniversary of the American Anti-Vivisection Association, held in this city on the 30th of January, calls for some comment by the medical press. The work during the past year has been principally directed towards enlisting professional and public sympathy in its work, and distributing pamphlets defending the object of the organization, which is to secure the regulation of vivisection by law. The question, as it now stands, would be simplified and very much aided towards a satisfactory solution, if each party to the controversy with regard to the practice of vivisection could be made to better understand the position of the other.

In the first place, it may be said in behalf of American vivisectors, taken as a whole, that they repudiate the definition of a vivisector given by M. de Cyon; they do not regard the sufferings of animals with pleasure or even with indifference; they deplore the necessity of inflicting pain or sacrificing life, but regard the ends of science as of sufficient importance to humanity to justify the course they pursue. This, at least, appears to be the opinion expressed by the author of a recent work which has been everywhere received with high encomiums as a fair, logical, and temperate defence of vivisection;* it also is the feeling which has been expressed by prominent physiologists who are now engaged in original research. No exception can be taken to the statement that all vivisection experiments that are not distinctly scientific in their object are unnecessary, and therefore cruel; and being cruel, should be condemned by every right-minded man or woman. The experiments of Brachet, who tortured a pet dog to death to test the limits of his affection, and the atrocious performances of Mantegazza, who invented ingenious methods of causing extreme physical agony to living animals, are not considered defensible by physiologists generally; and many members of the medical profession, although in favor of original research, are also decidedly opposed to the use of animals in the lecture-room to illustrate well-known surgical or physiological facts.

On the other hand, it is claimed in behalf of the Association that its object is not the abolition of vivisection entirely, but its restriction within proper limits. The names of the incorporators and managers of the American Anti-Vivisection Association sufficiently vouch for the propriety of the objects sought to be attained by the organization, and for the intelligent and fair consideration which will be given to the subject. Dr. Thomas G. Morton, of this city, is the president of the society for the current year.

If a disposition could be manifested by those engaged in vivisection to concede a little in return for greater security in carrying on necessary experiments, and they could be persuaded to formulate the conditions demanded by science, it is possible that a law might be framed in this State that not only would be satisfactory to those who are opposed to unnecessary vivisection, but which would also react to the benefit of science by increasing the value of the work done, and so establish beyond question the value of properly-conducted scientific investigation in experimental therapeutics and in physiology.

* Physiological Cruelty. By Philanthropos. New York, 1883.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE medical events of the present time are the honors conferred upon members of the profession. Ireland had to be satisfied with the knighthood of a surgeon; though not long ago Dublin could boast several medical baronets. England has been more fortunate. First came Andrew Clark, senior physician to the London Hospital, the medical adviser of the Premier and of a large proportion of the titled folks in Great Britain. Steadily, by careful pains and clinical acumen, Dr. Clark worked his way upwards at the London Hospital and among society. It is said he so impressed Mrs. Gladstone by the manner in which he discharged his duties at an institution with which she was connected that she induced her spouse to place himself in his hands, with results most satisfactory to all concerned. Sir Andrew Clark, Bart., like most of the leading consultants of the immediate present, has contributed little to medical literature; but that little has always been sound and valuable. He drew attention to "Fibroid Phthisis," and caused the profession generally to realize that there were other forms of lung-consolidation than the truly tuberculous form. He has also kept the subject of "Renal Inadequacy" well before the profession. Dr. Clark's observations are always worthy of close attention; and his manner is impressive, his speech brief, to the point, and epigrammatic. Though not a prolific writer, it must not be supposed that his contributions to medical literature are confined to the two subjects mentioned above. One great matter Dr. Clark has done which ought to earn for him the gratitude of the affluent, and that is, he has always pointed out clearly, unswervingly, and incessantly the evil consequences of a dietary too rich in albuminoids, especially when accompanied by alcoholic indulgence. He is neither a teetotaller nor a vegetarian; yet he may be called "the apostle of temperance" in matters of eating and drinking. Whether all who ought to be grateful to him are sufficiently thankful it is not in my power to affirm. The next is the veteran oculist, William Bowman. Middle-aged men remember the ponderous, but valuable as it was weighty, "Cyclopædia of Anatomy and Physiology" edited by Todd and Bowman, issued in parts, and containing in pretty full detail the best and most recent information on many and varied subjects,—a work of the very highest character. He was then Professor of Physiology and Anatomy at King's College. In 1842 he gained the Royal Medal of the Royal Society, and has been made a corresponding member of numerous foreign scientific societies. There is no more revered name in the ranks of medicine than that of Sir William Bowman, Bart. Even better known to the world, especially the world of surgery, than either of the above, is the name of Joseph Lister, "the apostle of the antiseptic treatment of wounds." His earlier contributions to the subject first attracted public attention when the late Prof. Sir James Simpson, Bart., and the late Prof. James Syme were worrying each other in their incessant warfare in Edinburgh, when the great obstetrician was advocating acupressure for the arrest of arterial bleeding,—an antiseptic measure in its way. Those who remember that time know how wonderful it was held to secure union by the first intention; how the French surgeons never attempted anything of the kind, but stuffed charpie into the green surgical wounds right away; and German surgery was about the same. Steadily, sturdily, unfalteringly, Lister propagated his views, and slowly, often unwillingly, converts announced their acceptance of his views, or at least his practice. At last French and German surgeons awoke to the teaching of the new faith, to the inestimable benefit of their patients. Even those who still contend against the germ theory have accepted the practice of the most scrupulous care and cleanliness in the infliction of surgical wounds, and in the dressing of the said wounds, with the most gratifying results. Sir Joseph Lister, Bart., has also received the gold medal of the Royal Society, and been elected a corresponding member of a legion of foreign societies, with other honors. He has earned for himself an honored and undying name in the annals of medicine. If the medical profession is honored by baronetcies being conferred upon these three gentlemen, the baronets of Great Britain may be congratulated on these accessions to their ranks. Still there is no medical peer. A curious instance of the survival of prejudice! Yet in these days of sanitation, of preventive medicine, of attention to the public health, one might imagine that a medical peer might not be quite out of place among our hereditary legislators. But his time may yet come. The showers of honors which have fallen right and left lately make mere knighthood a mark of disdain, or the indication of the want of means to sustain the honor of an hereditary title. Whatever the government, or our august lady the Queen, mean by this profuse distribution of handles to names, is unknown to the writer, and therefore he cannot instruct his readers.

Another medical event is the sudden appearance of a new medical publishing firm. Some little time ago an announcement appeared that the popular publishers Messrs. Cassell & Co. intended to issue a series of manuals for students of medicine. Instead of dealing with medical authors *seriatim*, they agreed with Malcolm Morris, known to the

profession as the author of a treatise on the "Diseases of the Skin," rather of a practical than of a comprehensive character. Morris is what very few men in the profession are,—viz, a really good business-man, and thoroughly fitted for his position; a right good-hearted fellow, too, who would live and let live. Through him a series of manuals have been arranged for, which will be of service to their writers as well as their readers. The first was "Elements of Histology," by Klein, which at once took its position, and asphyxiated Quain and Sharpey's massive work, indispensable before on account of its chapter on histology. Then followed "Surgical Pathology," by A. J. Pepper, of St. Mary's Hospital,—a work whose *raison d'être* has been demonstrated by its sale. Instead of massive, comprehensive works, separate manuals are provided, each dealing with its own subject-matter proper. For instance, "Human Physiology," by Henry Power, will be a work at once in immediate demand. Of course, human nature would not be what it is if Malcolm Morris was regarded as a benefactor by those authors whose works are threatened with extinction by these new books. But the rising generation of medical men will hold his name in respect.

Medical works other than students' manuals will probably issue before long from this last accession to the scanty ranks of medical publishers. The first medical publisher was Churchill, who for long had the field practically to himself; but first one and then several more publishers began to think the pickings of medical books were worth having. Whether the new recruit will go the length of essaying a medical journal or not is a matter on which opinions are divided. It is not unlikely that such an attempt will be made, though the field seems pretty well occupied by existing journals. With you a medical journal springs up somewhere in a night, and, instead of disappearing again as swiftly, holds on its way and survives. It is far different with us. There is little or no local *esprit*. The metropolis overshadows the provincial towns here; and though Birmingham has a puny medical journal, Liverpool a medico-chirurgical journal, and Bristol a journal, these local efforts only maintain a struggle for existence by comparison with journals of like character ayont the Atlantic. From this it is not to be inferred that the only journalistic power in the medical profession is to be found in London; only its amount there overshadows the rest of the land. The *Midland Medical Miscellany* covers an area which can well carry a medical journal of its own. As to medical literature, the tendency is more and more to reissue American works here, which seem to be largely taking the place of the works on special subjects which used to appear. A work on Practice of Physic, by the late Dr. Hilton Fagge, was announced, but whether it will be published after his untimely death or not is not yet apparent. There could have been little novelty in it, as a matter of course. A work on Obstetrics, by Robert Barnes and his son Fancourt, is announced to appear shortly. Otherwise the advertisements tell of familiar works, well known. "The Physiological Factor in Diagnosis," by the writer, has reached a second edition already, which tells that it fills a niche hitherto unoccupied.

The new year, however, commences with what promises to be very useful, especially to the large bulk of the profession, the men who toil for scanty rewards in the humbler quarters of our towns and many rural communities. Perhaps some others, too, of higher social grade may avail themselves thereof. The increasing income of the British Medical Association is enabling it to do many things, such as granting sums for scientific research, giving medals to deserving members of the profession, or helping a medical man oppressed by a vexatious appeal to the law by which sundry malevolent persons may practically subject him to a heavy fine. Now the proposition is made of "a medical sickness, annuity, and life-assurance society." In your country an average man, with pains and moderate thrift, can lay aside some surplus income to educate his children and keep himself when his days of capacity to labor are past. Here, unfortunately, it is not by any means always possible for a medical man to do this. Over large areas the working expenses swallow up the earnings, leaving barely enough to keep up appearances. For years this goes on; and, unless the medical man has a son who can step into the practice as his father falls out, the day comes at last when the daily bread runs short. The proposition is to institute such an insurance society on the basis of the British Medical Association, which could provide the funds, be security, and put any surplusage into the pockets of the members, instead of those of the shareholders in insurance companies. The design seems an excellent one, and deserving of all support that can be given to it. It is proposed that sums of from two to four guineas weekly during sickness be arranged for; and that these may be conjoined to certain yearly allowances payable on the insurers reaching sixty-five years, and continuing till death; also that sums at death may be secured, as is common now. It is suggested at present that the age of forty-nine next birthday should not be the ultimate limit for would-be insurers, though it might be well to fix this limit for the working of the scheme when once fairly a-going. It will thrive, doubtless, if well arranged and supervised by competent persons; and both conditions are surely feasible. It is to be hoped that there is no member of the profession so poor a bread-winner, so handicapped with a fam-

ily, or so thriftless that he cannot manage to insure in this proposed arrangement. It will be a very bad day for the public, and no gala-day for the profession itself, when the last struggling poor man takes his diploma and enters upon the field of practice. But the large percentage of poor men, poor in other senses than the mere need of money, who have entered the ranks of medicine in the past has done injury to the profession in that in the struggle for existence they may have stooped to much that is undesirable. It is not merely that such men choose to take up a lowly social status themselves, but they submit to what is very undesirable for the profession at large, and educate the laity to take like liberties with other and better men. It is sad to listen to the just complaints of a respectable medical man with one of these "brothers" on his flank. When all other measures fail, the second fiddle reduces his fees and awaits the result. To a large number of social units a "Dr." is a doctor, just as a grocer is a grocer; the wares of one and the worth of the other are identical; and, of course, they purchase the cheaper article. After pursuing a career of this grovelling kind until years have brought it to an end, this medical man is ready to accept the charity of the benevolent, and gets some measure of it. Of course, how far loyalty to his profession has been a factor in the calculations of this unit of the profession, and self-denial another, are matters upon which opinions might differ. But, without being uncharitable or ill-natured, one may suspect that he has looked little beyond his own self-interest, and has not been particularly clear-sighted about that. He has made himself out to be quite on an equality with his professional brethren not by rising to their height, but by striving to drag them down to his own status, by backbiting and defamation, by pointing out their mistakes, and other like means of doing them injury. He is not now so commonly found as he was, this noxious creeper, but he is yet to be seen in the hedge-rows oftener than is good or beneficial. His extinction is threatened by the increasing severity of the examinations, which terrify him dreadfully, and soon he will be largely non-existent. It is not his monetary poverty which renders him so objectionable; it is merely that his want of coin throws up his qualities in stronger relief. If he were not pinched, perhaps he would avoid some of the paths he treads. But in poverty he stoops to almost anything which will put a shilling into his pocket, and then clamors to be respected and treated courteously as an honorable member of a learned profession. No wonder his claim is not always admitted.

Now that this section of the medical profession is diminishing, there will be a fairer prospect for other men in the humbler ranks of the profession, and it is to be hoped that this new departure by the British Medical Association will be welcomed by what may be termed the rank and file of the profession. If so, it will most certainly be to the advantage of all. If a man can so be helped to make some provision for himself, instead of drifting on to the inevitable end in hopeless lethargy, it will be a work of brotherly kindness; while a great many men, willing but scarcely able to see how to help themselves, will find this movement give them a friendly boost. Not that poverty is a vice, or even a crime; but it throws up character in its strength, and, what is worse, its weakness. Consequently, if an element of thrift can be lent to those who are of themselves unequal to thrift, it is a boon to them. Placed on a basis of mutual brotherhood, such a scheme is more attractive than the prospectus of a new company, about which all men with a modicum of prudence would have their suspicions. It will be necessary for the financial success of the new move that it be in turn prudent about the selection or accurate appraisement of lives. Nor would the post of medical adviser to the insurance company seem to be highly attractive. It would be a most invidious post for an individual, and the danger of acting harshly towards a medical brother to whom insurance may be of the first moment, is one which most persons would like to avoid, and yet by such kind-heartedness may do detriment to a most deserving movement. The class of men to whom such a scheme is full of promise is just that where a large number of doubtful lives are to be found. Much poverty is the result of undue indulgence in alcohol,—undue in the sense of being beyond what is good for the individual either in person or in purse,—and yet the vice is capable of much careful concealment. Such lives are notoriously "bad from an insurance point of view," being liable to be cut short by intercurrent disease which a healthy organism could readily throw off. How to protect the new venture against this class of life will exercise the ingenuity of those who are at the helm. As to the bulk of the profession, it will be a distinct advantage. For there are extremes; and while at one end we find medical baronets, at the other we find men who can hardly scrape together a bare living; and provision for the one extreme is as desirable as conspicuous honors are for the other. All success, then, to the new "friendly society" aspect of the British Medical Association!

J. MILNER FOTHERGILL.

CHICAGO.

IN consequence of our Board of County Commissioners forbidding the delivery of unclaimed pauper dead to the medical schools, a general raid has been made upon the graveyards of small towns in the State, for dissecting-material to meet the demands

of this city; and not a little trouble has been experienced by many of the colleges to keep their tables meagrely supplied. Occasionally the friends of deceased persons come to the city, and, by process of law and otherwise, investigate the dissecting-rooms in quest of missing bodies, not always unsuccessfully. At such times there is a good deal of popular excitement, and our Board of County Commissioners are roundly abused, and justly so. It appears there is some religious influence holding the Commissioners to their present course, as a large majority of our pauper dead come from one denomination.

A somewhat peculiar and interesting bit of history has been developed in connection with the life of a monstrosity. About thirty years ago a respectable couple had born to them, in this city, a boy without arms. To one shoulder was attached a portion of a hand or flipper having three ill-formed fingers at its extremity; the other shoulder had a rounded protuberance only, bearing no indication of amputation in utero. The child was well formed in every other particular, and grew to be a bright, intelligent, and successful business-man. He wrote an exceptionally neat and rapid hand, the movements of the pen being aided by his mouth. About two years ago he married a young lady of good family, and last autumn he died of pneumonia. At the time of his death his wife was far advanced in pregnancy, and lately gave birth to a boy having the same deformity as the father, with this slight difference, that there are in this case no rudimentary fingers. It may be stated in this connection that the parents manifested much anxiety regarding their expected offspring.

As an illustration of the working of our lunacy laws, I will relate a case that came into court a few days ago. A lady of 60 years was charged with insanity, and the expert, medical, and lay evidence clearly went to show the patient (prisoner) to be of unsound mind,—that during the past two years her character, habits, etc., had undergone a complete change, and that her acts and faculties showed pretty clearly that she was suffering from the early stage of senile dementia. The jury brought in a verdict of insanity, whereupon the counsel for the defence took the extraordinary step of having the jury polled, and demanded a new trial; and, strange to say, the judge set the verdict aside and surrendered the prisoner to the custody of her lawyer till such time as he, the judge, might decide upon another trial. The defendant in this case is wealthy and has full control of considerable means. It is not, however, a case where the least wrong can be attached to the motives of the relatives.

Our Home for the Friendless has long been receiving foundlings, and amongst this class of inmates the mortality has been frightful, but one infant under three months having survived more than three months after admission. This has been true not of one but of several years past. In view of this state of things, it has been advised that children under one year shall not be admitted. M.

January 18, 1884.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held January 17, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

ANTISEPTIC DRESSINGS AS THEY ARE USED IN THE NEW YORK HOSPITAL. A DEMONSTRATION,

was the title of a paper read by R. F. WEIR, M.D.

The matter he was about to present, he said, might be of little interest to the hospital-surgeon; it was more especially intended for the benefit of the general practitioner. There are some differences in the details of antiseptic dressings as now used and formerly, but they still involve the same principles originally set forth by Sir Joseph Lister. The object sought for in the treatment of wounds is to place them in a condition to permit of the best drainage, to keep them at rest without frequent renewals of the dressings; and in order to do this it is necessary to resort to chemical substances which will prevent putrefaction. He did not wish to enter upon the theoretical part of the subject, but one could not help thinking that the development of micro-organisms was associated with decomposition either as a cause or an immediate concomitant effect. The researches of Lister had shown that the healthy tissues had to a considerable degree the power of resisting the development of germs, notwithstanding the fact they found entrance into the air-passages and alimentary tract. When the tissues became abnormal a better soil was prepared for the development of micro-organisms. The object of antiseptic dressings was to neutralize the development or effect of disease-germs, and, until recently, this was commonly done by the use of carbolic acid or iodoform. Carbolic acid, however, was volatile, and unless used fresh could not be depended upon. Again, carbolic acid and iodoform were both liable to produce toxic effects. Since a year ago, in March, he had been using corrosive sublimate. He was led to bring it before his audience to-night from having witnessed its extensive use abroad during the past summer, where it had produced excellent results. It was applied to wounds in several different ways,—in the form of gauze, cheese-cloth, or mull, impregnated with the salt and applied to the wound. The absorbing power of the

gauze was increased by boiling in a weak solution of soda or muriatic acid, but more recently they had obtained it prepared directly from the manufacturers. To avoid too frequent and early changes of the dressing, substances of greater absorbent powers were applied, such as peat. Formerly the white was used in Germany, but now the black mixed therewith was preferred, as it was supposed to possess in itself antiseptic properties. Dr. Weir did not think it possessed much advantage over the white. Neuber left it on in some cases forty-two days without a change of dressing. This great length of time, however, was not necessary, as the tendency to septic absorption passed away in ten to fifteen days. One objection to it and to other absorbent dressings was that they were too bulky, and were in the way of the application of splints in compound fractures, when a more frequent inspection should be made. Jute, formerly carbolized, but at present used with the corrosive solution, was an excellent absorbent dressing, particularly the finer quality now to be obtained of the importer. The pulp of wood, ready to be made into paper, was also an excellent dressing for wounds, and was capable of absorbing thirteen times its weight in water. The absorbent power of jute was from four to six, and of peat nine to ten, times their weight of water. An excellent cheap dressing, which could be obtained anywhere in our own country, was common wood-moss. It was necessary to bake it and destroy the germs which it contained before using it. It would take up four times its weight of water. These substances were easily prepared with the corrosive solution. The jute and moss were dipped in a solution of one part to a thousand, fifty parts of glycerin being added. The next day they were wrung out and allowed to dry. The gauze and cotton-batting were prepared as follows: Corrosive sublimate, twenty parts; water, four thousand four hundred and eighty; glycerin, five hundred. The specimens should be freshly made, for the corrosive sublimate was disposed to change into calomel. Most of the time during the operation a solution of the bichloride, one part to a thousand, sometimes to two thousand, was allowed to trickle over the wound. The bedding and other parts of the body were protected by passing the injured limb through a hole in a rubber blanket. The catgut ligatures were prepared by a ten minutes' bath in a one to one hundred solution of the bichloride, and afterwards for ten to fifteen hours in a solution of one to one thousand, and kept in absolute alcohol. Sometimes they were prepared after Kocher's method, put into oil of juniper, and afterwards into absolute alcohol. Dr. Weir had seen no poisonous effects from the bichloride, but the possibility of this might be guarded against by using the boro-salicylic solution.

The wound was preferably closed with catgut, the continued suture being employed. Sufficient space was left for a drainage-tube. The decalcified bone tube was used. They were specially serviceable in amputations, etc., where it was necessary to get primary union, as they became absorbed in five or six days. Having cleansed the wound carefully with the running solution, several sponges should be placed over it to carefully compress it. Replace them by sublimate-gauze, with which make pressure, then apply more of the handkerchiefs. Secure them by sublimate-gauze bandage, then apply the absorbent dressing of peat, or other substance, done up in bags of suitable shape and thickness. Some smaller ones may be added, bound firmly in position by crinoline bandage dipped in the antiseptic solution. The impermeable outer covering of Lister was not employed. The dressings were not changed until signs of something going wrongly manifested themselves. A persistent temperature for twenty-four hours was sufficient indication, in Dr. Weir's opinion, for a change of the dressing. The instruments were put into a five per cent. solution of carbolic acid. Dr. Weir then dwelt somewhat upon the subject of cleanliness, to which he attached great importance, although he believed that it could not replace germicides. Excellent results had been obtained by its observance alone in the hands of Mr. Tait and others. In the New York Hospital, before proceeding with an operation, the parts were washed with soap and water, and then with a mixture of turpentine and alcohol, two ounces to the pint. Importance should be given to the preparation of the sponges. They were first freed of sand by beating, then washed in warm, not hot, water, then placed in one to one thousand solution of permanganate of potash for twenty-four hours. They are then washed in warm water, then bleached by immersion in a solution of one to one hundred of sulphide of sodium, to which is added a one-fifth part of a watery solution of hydrochloric or oxalic acid, of a strength of eight to one hundred, stirred with a stick a few minutes until whitened, again washed in warm water, and allowed to stand in running water, then put into a carbolic acid solution, one to twenty, or in a solution of bichloride of mercury, one to one thousand, in which they are kept until used. Thus prepared they were cheap, and need not be again used, especially after operations in which they are liable to absorb contaminating material. If again used, they are first thoroughly washed in running water, kept for some hours in a weak solution of carbonate of soda, then placed in the antiseptic solution.

In certain wounds of the body, as of the mouth, the rectum, etc., it was more convenient to employ iodoform. It could be applied rubbed into mosquito-netting or other

material. More than forty-five grains would give rise to poisoning.

Perfect rest was sustained, even in minor operations; and an easily cleaned splint was that made of enamelled iron.

Dr. Weir then gave the statistics taken from the practice of Billroth, Volkmann, hospital records, and others, going to show that antiseptic dressings did "pay." He himself had done thirty-five amputations without a single death,—one hip-joint, seven knee-joint, seven thigh, nine leg, seven arm, and two forearm amputations.

DISCUSSION.

Dr. A. C. POST, being invited to open the discussion, said he had been much interested in the remarks made by Dr. Weir, and he himself was fully convinced of the value of what was known as antiseptic surgery, although he was not prepared to acknowledge the necessity of all the details of the treatment as given by the author. This was certainly true respecting the treatment of wounds of minor importance. He called attention to one application to wounds which Dr. Weir had not mentioned in his remarks, namely, the subnitrate of bismuth. This he had dusted over the wound in many cases of minor injury, and then applied an ordinary dressing, and had obtained excellent results thereby.

Dr. J. D. BRYANT referred to experience with the antiseptic methods as used during his service as interne in the Bellevue Hospital in 1868 to 1871. During a part of that time he treated twelve cases of compound fracture. The wound was washed with a solution of carbolic acid, and dressings applied soaked in a solution. The strength was 1 to 80 or 1 to 120, according to the purpose for which it was employed. Only two of the twelve patients died, one of them being a very severe case indeed. The limb was also put up in an immovable plaster-of-Paris apparatus. Since the spring of 1871 he had employed the Lister treatment of wounds, but the last few months had been trying the virtues of the bichloride solution, 1 to 2000. There had been but two cases in which unfavorable symptoms occurred under its use, and in those the difficulty could be traced to negligence. He had entire confidence in antiseptic treatment, and related two cases illustrative of its value in a high degree, one being a case of large scrotal hæmatocele, and the other a tumor of the parotid gland. He thought it important for the surgeon to simplify the antiseptic method if possible, so that it could be carried out with ease and efficiency by the general practitioner. The present times pointed more favorably to the use of bichloride. He employed catgut soaked in oil of juniper.

Dr. L. A. STIMSON thought the subject a complex, not a simple one; not one which related simply to the employment of an anti-germ dressing. For him who believed that all the complications in the progress of wound-healing were due to the influence of micro-organisms the problem was a simple one; all that was necessary, in such a man's opinion, was to find some efficient germicide, and employ dressings which would tend to prevent the entrance of germs, and use the chemical which would kill any that found their way to the wound. But for the man who thought complications could also arise from some other source, although that other source was unknown to him, the question was a complex one. It was true that germs might cause septicæmia, but it could not be logically argued from that fact that all cases of septicæmia were due to the influence of germs. Moreover, it was not logical to conclude that a dressing applied because it is supposed to be antiseptic or germ-destroying is of benefit only because of its germicidal properties. The beneficial result obtained from its employment may be due to some other factor than the simple one of power to kill micro-organisms. For instance, it had been shown by Dr. Weir that the carbolized dressing employed for so many years had lost its carbolic acid by evaporation, and yet excellent results were obtained by its use. Now it has been found that the bichloride will become changed after being kept for five or six days and assume the form of calomel, and yet a much older preparation had been employed with excellent results. Peat had been employed with good results in its natural state, and yet Dr. Stimson had learned by certain experiments that peat was full of germs. But, then, brilliant results and disastrous failures had followed the employment of every antiseptic. The experience of no single surgeon was sufficient to test the value of all the antiseptics in all or a single department of surgery. Nevertheless, Dr. Stimson had faith in antiseptics in purifying the patient, the surgeon, and his assistants, and the instruments; in the employment of drainage and compression; and rest should also be secured. While he believed in the employment of antiseptic methods, he did not overlook the fact that other conditions might give rise to complications, to fever and sepsis, however well antiseptic precautions might be carried out. This was especially true where the bones were operated upon. The surgeon, therefore, who took unnecessary risks, placing entire dependence upon antiseptic methods for the prevention of complications, was rash to the verge of criminality.

Dr. A. G. GERSTER pointed out certain advantages which corrosive sublimate possessed over carbolic acid as an antiseptic. One of the most important was that it did not tend to dissolve the blood-clots which occluded the mouths of the divided vessels and gave rise to a bloody oozing, necessitating an early change of the dressing. During the past six

months he had employed the bichloride in his service at the Mount Sinai and German hospitals, and with entire satisfaction. He had sought to simplify the antiseptic dressing so that it could be easily made use of by the general practitioner, and had found that common sawdust soaked in the bichloride solution, one to five hundred, and then dried and put away in tight boxes until used, was a very cheap and as good a preparation as the most costly and fanciful. Ordinary cotton-batting prepared with the bichloride was also an excellent dressing. He mentioned a case of fracture of the elbow-joint in an aged man, in which it was employed, improvised, and the patient made an excellent recovery. He thought much better results were now being obtained since the thorough carrying out of antiseptic surgery. It was true that now and then unexpected suppuration would take place, even when the antiseptic dressings were applied seemingly with the greatest care. But usually in such cases the vigilant surgeon would be able to find some neglect in the details of the treatment. Very often, in his opinion, the trouble was due to the direct introduction not only of micro-organisms, but even of lumps of dirt. He mentioned a case of recurring dislocation of the shoulder-joint in which the capsular ligament was found stretched. He cut down upon the joint, exsected a portion of the ligament, and applied sutures. Within a few hours the temperature indicated sepsis, and he immediately removed the dressings, opened the wound, and found three or four ligatures the centre of collections of pus, while the other ligatures, not taken from the same strand of cut, were perfectly clean. In that case, doubtless, the one ligature carried the germs of disease.

Dr. WEIR, in closing the discussion, said that he agreed with both Dr. Stimson and Dr. Gerster, although they apparently took opposite sides of the question. He agreed with Dr. Stimson that there were cases in which sepsis would develop in spite of the most careful antiseptic precautions, and that, therefore, we were not justified in undertaking hazardous operations where the object to be gained was not of importance. He did not think that we yet had absolute control of all the elements of wound complication; the antiseptic method was only one of the steps towards perfection in treatment. With regard to subnitrate of bismuth, referred to by Dr. Post, it had not so much control over erysipelas as had some of the other agents mentioned.

OWING to the secession of the old New York County Medical Society from the American Medical Association, a new county society has been formed in that city, in order to be in affiliation with the other societies throughout the country.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held January 23, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

NEURO-FIBROMATA COMPLICATING SPINA BIFIDA.

Dr. ELLIOTT presented a specimen illustrative of this affection, the case being that of a child which had come under the care of Dr. J. M. Roberts for orthopædic treatment. There was accompanying double talipes. Pressure upon the fontanels caused fluctuation at the lumbar tumor. An injection of a fluid was made into the tumor in the course of the treatment, but was followed by convulsions, and some hours later by death. Dr. Elliott was of opinion that the tumor was due to an arrest of development in the epi- and meso-blast taking place early in intra-uterine life.

HYDRO-SALPINX.

Dr. BROWN presented the ovaries and Fallopian tubes removed from two different patients. In the first case considerable hemorrhage followed the birth of a child, and the patient was slow in recovering from the confinement. About six weeks later she began to develop symptoms of melancholia, and suffered from severe pelvic pains. A tumor was felt in the posterior *cul-de-sac*, which was very sensitive, and supposed by Dr. Brown and Dr. Dawson to be due to prolapsus of the right ovary. At the laparotomy the left ovary was found cystic, and both tubes were the seat of hydro-salpinx. The patient was much relieved by the removal of the diseased organs. In the second case the patient had suffered for some years from pelvic symptoms. She was doing well since the removal of the dropsical Fallopian tubes.

VISCERAL LESIONS IN A CASE WITH EPILEPTIFORM ATTACKS.

Dr. R. W. AMIDON gave the history of a case of epileptiform attacks occurring in a boy 7 years of age, of very bright intellect, coming from a neurotic family. When 3 years of age he suffered from measles, which were followed, according to the mother's statement, by general œdema; and at about the same time spells developed, which were treated by the attending physician with bromide of potassium, ten grains three times a day. At the time when Dr. Amidon saw the patient, there was an eruption from bromism upon the legs, face, and forehead, which readily disappeared on discontinuing the medicine. Respecting the attacks Dr. Amidon said the following facts were against the idea of epilepsy: first, he had never known a person to have seventy-two regular epileptic convulsions in as many hours, and yet retain comparatively good health and a clear head, as this

patient had done. Second, the child had a distinct recollection of each convulsion, and was always able to foretell their occurrence. Third, it never uttered a cry before the convulsion. Fourth, it never bit the tongue, nor frothed at the mouth. Fifth, there was preservation of sensibility and resistance to opening the eyelids during the attack. Certain of these facts led to a diagnosis of hystero-epilepsy and a favorable prognosis. The remedies employed in the treatment were aqueous extract of opium, cannabis indica, quinine, iron, tonics, regulation of the diet. There were symptoms of improvement under treatment, but relapses occurred. Death finally took place from œdema of the lungs and heart-failure. At the autopsy the stomach was found dilated, the spleen enlarged and congested, the kidneys congested, with atrophy of the cortex. The right ventricle of the heart was dilated, and there was fatty substitution in its walls; the left was concentrically hypertrophied; the right auricle was thinned and dilated. The brain was normal and well developed. Had the condition of the stomach been recognized during life, he should at once have resorted to hypodermic medication.

PLEURISY WITH PERICARDITIS.

Dr. FERGUSON presented specimens illustrating these affections, removed from a man who recently died in the hospital with the usual symptoms. He also presented specimens illustrating the condition known as surgical kidney. Independent of the recent lesion was found anchylosis of one knee and ankle, enlargement of the distal end of the femur, fatty degeneration of the muscles of the leg, and atheroma of the vessels, due to an injury which the patient had sustained twenty years ago, the nature of which he did not remember.

DILATATION OF THE STOMACH.

Dr. JOHN C. PETERS presented the stomach of the patient whose history he had reported in part at a recent meeting of the Society. At the autopsy the stomach was found dilated from four to six times its normal size, due to constriction at the pyloric extremity. There was no tumor nor malignant disease.

Dr. AMIDON asked whether any benefit had been derived from medication by the mouth.

Dr. PETERS replied that to have given medicine by the mouth would have been equal to throwing it into a swill-pail. It would not at all have been absorbed by the mucous membrane of the stomach.

CARCINOMATOUS TUMORS OF THE CALVARIA.

Dr. H. N. HEINEMAN presented the calvaria of a patient, a woman, who, in 1881, suffered from carcinoma of the right breast, which was extirpated by the late Dr. Mason. Recently she appeared at the Mt. Sinai Hospital, presumably suffering from carcinoma of some of the internal organs. At her death, however, these were all found unaffected by malignant disease. There were some infiltrated glands in the axillary and cervical regions. The right side of the calvaria showed several bony growths,—one upon the petrous portion of the temporal bone causing considerable pressure upon the medulla, and one upon the sphenoidal bone giving rise to exophthalmus. The diploë was infiltrated, but the dura was not affected.

Dr. HEINEMAN also presented specimens illustrative of acute general tuberculosis, occurring in a child one year of age, recently arrived by steerage-passage from Europe.

CARCINOMA OF THE STOMACH.

Dr. BEVERLY ROBINSON presented a stomach which was the seat of a cancerous tumor at the pyloric end, the interest of the case relating to the diagnosis. The surgeon of the hospital was unable to recognize the tumor, which Dr. Robinson, as he believed, was able to feel on several occasions. He was of opinion that at certain times it was so covered by the liver as to be hidden from the touch, while at other times the position was such that it could be distinctly recognized by palpation.

OSTEOLIPOMA (?).

Dr. J. A. WYETH presented a tumor which had been removed from the radius, about one inch from its carpal extremity. A combination of a bony and a fatty tumor is rare, but the present case seemed to illustrate that condition. The lipoma, which consisted of two lobes of considerable size, was attached by a pedicle to a small exostosis of the radius. He was inclined, however, to accept the view suggested by the President, that the fatty and the bony growths had no special pathological relation to each other, but the presence of the one may have given rise to the other by irritation.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 10, 1884.

The President, DR. TYSON, in the chair.

Specimen of osteomyelitis of tibia. Exhibited by CHARLES M. WILSON, M.D.

GEORGE L., æt. 42, was admitted into the surgical ward of the Pennsylvania Hospital November 26, 1883. Sixteen days previously he had been knocked down on shipboard and had sustained a wedge-shaped fracture of the tibia and an oblique fracture of the fibula of the right leg about the middle. When admitted, the fragments were in

malposition and partially united. There was considerable deformity, the lower fragment of the tibia being tilted up and overlapping the upper fragment. By appropriate treatment the fracture was retained in fairly good position, and the case was progressing favorably until the afternoon of December 26, just one month after admission, when he had a severe chill, followed by a temperature of 103½° F. He complained of violent pain in left shoulder-joint. He was treated with salicylate of sodium. Next morning his temperature was 102½° F., with intense pain in both shoulders and elbows. The same treatment was continued, under the supposition that the case was one of acute articular rheumatism. On the afternoon of the second day, he had a severe chill, with an evening temperature of 104⅘° F., and a presystolic mitral murmur was detected. Dr. Wilson now considered the case to be one of pyæmia, and gave massive doses of quinia, stimulants, and digitalis, but he steadily grew worse, and died of exhaustion on the morning of December 30. Post-mortem twenty-six hours after death. Rigor mortis marked. Body well nourished. Posterior portion of body much discolored. Extensive ecchymoses over arms and shoulders. Smaller patches over abdomen and chest; one and a half ounces of clear serum in the pericardial sac, with many ecchymoses over the surface of the heart. Both sides of heart relaxed and partially filled with post-mortem clots. The valves on right side appeared normal. The aortic valves were incompetent, and their free borders were roughened by recent vegetation. There was also some slight thickening and contraction. The mitral valves showed old thickening as well as signs of recent inflammation. The endocardium of the left ventricle showed numerous spots of ecchymosis. The heart weighed sixteen ounces, and its tissue was a good deal softened. Spleen normal. Left kidney weighed seven ounces, was somewhat swollen, and its tissues were slightly flabby. The capsule was thickened and somewhat adherent. The organ was congested and somewhat swollen. Right kidney weighed six ounces, and presented same appearances as the left. Liver was large, swollen, and marked by the ribs. Its surface was mottled with rounded yellowish patches, surrounded by dark-red areolæ. Section showed it to be markedly congested. Its weight was four pounds four ounces. Lungs much congested, the base of the left being anteriorly bound down by old adhesions. The brain was not examined. Examination of the fracture showed it to be ununited, and there was no callus detectable. The periosteum tore easily. On section, the medullary substance of the cavity of the tibia showed marked evidences of inflammation. There was a puffy septum of granulating tissue between the ends of the fragments. Above there was evidence of extravasated blood, and two and a half inches above the line of fracture there was a small circumscribed medullary abscess. The medullary tissue was inflamed and streaked with red lines.

Through the kindness of Prof. Brinton and Dr. Longstreth, Dr. Wilson was enabled to show several pictures illustrative of osteomyelitis. This was the only case of death from simple fracture recorded at the Pennsylvania Hospital. This disease must be a very rare sequel of simple fracture. It is not necessarily a fatal disease, as the inflammation may become circumscribed, a depot of pus formed, and the destructive processes end there; or a portion or the whole of a bone may die or be removed. It is easy to see how a virulent inflammation going on to suppuration, with no vent to the pus, as in this specimen, could readily give rise to septic poisoning. Dr. Wilson stated that he was indebted to the courtesy of Dr. Longstreth both for the specimen and assistance in its preparation.

Dr. TYSON said that he had seen many cases of osteomyelitis from gunshot injuries during the late war; but he could not recall a case where the medullary canal was encroached upon by a condensing osteitis, as in this specimen.

Dr. NANCREDE related a case of fatal septic trouble following a simple fracture of the thigh, where the starting-point seemed to him to have been a superficial ulceration of the skin, produced by the adhesive plaster. Possibly section of the bone might have revealed an osteomyelitis; but, as the fracture was firmly united, he thought the skin abrasion the starting-point, and related two cases of pyæmia produced by equally trivial causes.

Dr. LONGSTRETH related a case seen by him when a resident physician at the Pennsylvania Hospital. The patient had a fracture of the thigh of three weeks' standing, and was apparently doing well, when chills, sweats, lung-consolidation, etc., ushered in a fatal attack of pyæmia. A post-mortem revealed osteomyelitis and general pyæmic manifestations. A possible explanation of Dr. Wilson's case is that the patient had been on board ship for three weeks after his injury, where the treatment must have been of the crudest description.

Dr. ESKRIDGE called attention to the endocardial trouble found in septic disease, which he had been taught as a student to consider was of an ulcerative form and of fatal prognostic import. He had, however, seen two cases which presented all the symptoms of ulcerated endocarditis, but which had recovered; while in two others, with a similar clinical history, post-mortem examination revealed only a simple non-ulcerative endocarditis.

Dr. SHAKSPEARE asked whether this condensing osteitis might not have been due to a previous syphilitic trouble?

C. B. NANCREDE,
Recorder.

REVIEWS AND BOOK NOTICES.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL SOCIETY. Volume VII., for the Year 1882. Philadelphia, Pa., Henry C. Lea's Son & Co., 1883.

Considering the long interval between the meeting of the Society and the issue of its Transactions, this volume might be suitably known as the *liber serotinus*. The issue of previous volumes had been provokingly, even vexatiously, delayed, and some were ungracious enough on this account to find fault with the Boston secretary; but now that a New York secretary has been appointed, it is found that the delay is still greater. If New York thus signally fails, where on the boundless continent can hope or help be found?

But let us not quarrel with our bread and butter, even though the waiter has been a long time in bringing it and we have grown much older and most weary with expectation, for the volume is a good one, and, like its predecessors, not less handsome in appearance than valuable in contents.

In the Presidential address, which is by Dr. Emmet, the author departs from the usual custom of presidents of professional associations: instead of an address upon general topics, its wise author considers a special subject, —viz., making "A Button-hole-like Opening in the Female Urethra" for diagnostic and therapeutic purposes. In his concluding remarks Dr. Emmet makes the following statements:

"I have presented a mode of exploration for the female urethra, the advantages of which are not urged upon theoretical grounds, but from actual experience and close observation extending over several years." . . . "It is claimed that the advantages from the operation for exploration are greater than can be gained by any other method known to the profession, as the whole canal can be fully exposed, and any mode of treatment suggested by the condition of it can be easily applied."

The operation is done by introducing a block-tin sound, large enough to put the tissues on the stretch, into the urethra, and then cutting through to the canal from the vaginal surface; care must be taken not to carry the incision either so far forward as to injure the orifice of the urethra, or so far backward as to divide the neck of the bladder: where exploration only is desired, the incision may be closed immediately after this is accomplished.

The most important criticism upon Dr. Emmet's address was made by Dr. Skene, whose high authority in all matters pertaining to diseases of the female urethra and bladder no one questions. Dr. Skene asserted that the method is excellent for the diagnosis of urethral polypus or any of the neoplasms, and that there its value ceases; it is very much inferior, for example, to the endoscope in the diagnosis of ulceration and of fissure.

The Proper Use of Ergot in Obstetrics is the title of the next paper, its author being Dr. Joseph Taber Johnson, of Washington, D.C. Dr. Johnson is quite radical in his views, declaring that he thinks the human race would be better off if ergot were banished from the lying-in room,—an opinion which will hardly be upheld by many in the profession.

Dr. Drysdale, of Philadelphia, is the author of the next paper, *The Ovarian Cell, its Origin and Characteristics*. Here is a paper elaborate, controversial, and yet inconclusive; at least the profession is slow to accept the conclusions of its author. Mr. J. Knowsley Thornton, of London, who was present, in discussing the paper, stated that from his experience the practical value of the Drysdale corpuscle is often at least immaterial. The results of the study of Dr. Garrigues in regard to the microscopic characters of ovarian fluids, are well known as directly antagonizing the statements of the author of this paper. It will not do, however, to ignore the researches of so industrious a man as Dr. Drysdale, researches which have been carried on for so many years, and which include the examination of the fluids from two thousand abdominal cystic tumors. If the Society desires the establishment of the truth in regard to this greatly-controverted matter, it could not do a wiser thing than to refer the subject to a committee of microscopists, giving them two or three years to make their report; let us have some positive knowledge, some fixed conclusions, in place of continued controversy.

Dr. R. Stansbury Sutton, of Pittsburg, contributes a paper entitled *Some Remarks on Ovariotomy, with Special Reference to the Treatment of the Pedicle*. Dr. Sutton gives the various methods of treating the pedicle which have been or are practised by famous operators, refers to the use or the non-use of carbolic acid spray, and states fourteen conditions which he believes lead to success, and sixteen which lead to failure in ovariotomy.

The next paper is by Dr. Fordyce Barker, and is entitled *Leucorrhœa considered in Relation to its Constitutional Causes and Treatment*. In these days, when if there be not too much surgical there certainly is too little medical gynæcology, Dr. Barker's paper is peculiarly valuable. It may be useful for those who are in danger of becoming enamoured of uterine surgery to ponder such sentences as the following from this veteran practitioner, this wise observer: "I have seen leucorrhœa, and various morbid conditions of the os and cervix, disappear by the use of proper hygienic measures, and such treatment as was indicated for the improvement of the general health." . . . "In very many cases in which leucorrhœa and other uterine disorders have been the consequences of parturition, local treatment is useless, and often positively in-

OLEATES.

These preparations are salts formed by the union of oleic acid with the respective bases indicated. They are designed for external application, and owe their superiority to the well-known penetrative property of oleic acid. Their medicinal action is entirely dependent on their bases, which are quite readily introduced into the circulation when applied epidermically in this form. As a means of securing the constitutional effects of these bases, their application in the form of the oleates offers many advantages, which will be readily appreciated, especially in the treatment of children and in cases of irritability of the stomach.

Although the advantages to be derived from the combination of bases with oleic acid were recognized as early as 1872, the use of these compounds has not become general, and principally because of defects in the pharmaceutical preparation, the original crude method of their preparation not having been improved upon. Within the past year Dr. J. V. Shoemaker, of Philadelphia, has made the subject of the oleates one of especial study and experiment, both from a pharmaceutical and a clinical standpoint. The result has been the production of a number of very eligible compounds, and the discovery of therapeutic properties hitherto unrecognized. We have secured from Dr. Shoemaker full information touching his methods, and are now prepared to furnish oleates of the following metals, which have been found of great value in the affections indicated:

ALUMINIUM.—A valuable astringent, serviceable in eczema, and as a dressing for burns.

ARSENIC.—This preparation contains twenty (20) grains of oleate of arsenic to the ounce, and is employed as a caustic in the treatment of lupus, epithelioma, etc.

BISMUTH.—An excellent emollient application.

COPPER.—For the treatment of ringworm, etc.

IRON.—Readily soluble in the fats, and useful both as a local astringent and as a general tonic.

MERCURY.—Useful as a discutient to inflammatory exudates, and for the constitutional effect of the metal.

LEAD.—A cleanly and efficient substitute for Hebra's Diachylon Ointment.

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Aconitine (2 per cent. of the alkaloid).
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Morphine (10 per cent. of the alkaloid).
Morphine and Mercury (5 per cent. morphine and 20 per cent. mercuric oxide).
Quinine (25 per cent. of the alkaloid).
Strychnine (2 per cent. of the alkaloid).
Veratrine (10 per cent. of the alkaloid).

OINTMENTS OF OLEATES.

These contain the several metals mentioned above. They are much more cleanly than ointments as ordinarily prepared, and for all the properties of ointments are much to be preferred.

Circulars fully descriptive of the above, and such other information touching the therapy of the oleates as has appeared, will be furnished gratis on application.

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Since the introduction of Pepsine by Boudault and Corvisart in 1854, the original BOUDAULT'S PEPSINE HAS BEEN AT ALL TIMES CONSIDERED THE BEST, as is attested by the awards it has received at the Expositions of 1867, 1868, 1872, 1873, in 1876 at the Centennial Exposition of Philadelphia, and in 1878 at the Paris Exposition.

The most reliable tests, carefully applied, will satisfy every one that BOUDAULT'S PEPSINE HAS A MUCH HIGHER DIGESTIVE POWER than the best Pepsines now before the profession, and is therefore especially worthy of their attention.

BOUDAULT'S PEPSINE is prepared in the form of Pepsine Acid and Pepsine Neutral. It is sold in bottles of one ounce, with a measure containing exactly five grains; also in bottles of 4, 8, and 16 ounces for dispensing.

BOUDAULT'S WINE OF PEPSINE.

Formula of Dr. Corvisart.

The taste of Pepsine being perfectly disguised in this Wine, it may be recommended to persons who have difficulty in taking Pepsine in the form of powder. This Wine is tested so that a tablespoonful of it is equal in digestive power to ten grains of Boudault's Pepsine in powder. Sold only in bottles of 8 ounces.

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TANRET'S PELLETIERINE.

FOR THE TREATMENT OF TAPE-WORM (TÆNIA SOLIUM).

This New Tanifuge, the Active Alkaloid of Pomegranate Bark, has of late come into extensive use in France for the treatment of Tape-Worm (Tænia Solium). The results of numerous experiments with it at the Marine Hospitals of Toulon, St. Mandrier, etc., and in the Hospitals of Paris, St. Antoine, La Charité, Necker Beaujon, etc., have all been most satisfactory. Dr. Dujardin Beaumetz, Member of the Academy of Medicine, and Prof. Laboulbene, in their report to the Society of Therapeutics, have given it their unqualified approval after the most searching experiments. This preparation is pleasant to administer, and if certain preliminaries are observed success will be insured. Sold only in bottles containing one dose.

TANRET'S ERGOTININE.

ALKALOID AND ACTIVE PRINCIPLE OF SPURRED RYE.

This is a well-defined alkaloid that must not be confounded with Ergotine or other extracts. It is given in doses of from ¼ to ½ milligramme (1-240th to 1-120th of a grain) in all cases where Ergot is indicated, viz., Flooding, Post Partum Hemorrhages, Metrorrhagia, etc, etc. It is put up in the following forms:

Syrup, containing ¼ milligramme to each teaspoonful; DOSE, from 1 to 6 teaspoonfuls per day.

Solution, for hypodermic purposes, containing 1 milligramme to each cubic centimetre; DOSE, from 3 to 10 drops.

The Institute of France has awarded one of its prizes to Mr. Chas. Tanret for the discovery of these alkaloids.

Tanret's Pelletierine and Ergotinine are only prepared by Mr. Chas. Tanret, Laureate of the Institute of France, 64 Rue du Rempart, Paris.

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DRAGÉES, ELIXIR, AND SYRUP OF IRON.

"The experiments made in the hospitals of Paris have demonstrated that *Dr. Rabuteau's Dragées, Elixir, and Syrup* regenerate the red globules of the blood with a rapidity never observed with the use of the other ferruginous preparations. These results have been proved by the various *Compt-Globules*

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Dr. Rabuteau's Elixir is prescribed when some difficulty is experienced in swallowing the *Dragées;* it is especially adapted to weak persons whose digestive functions need strengthening or stimulating

Dr. Rabuteau's Syrup is especially prepared for children, who take it readily because of its agreeable taste.

A sample of *Rabuteau's Dragées* will be sent free to any physician mentioning THE PHILADELPHIA MEDICAL TIMES.

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jurious, but a cure results from appropriate constitutional treatment."

The next paper is on *Care of the Perineum*, its author Dr. Theophilus Parvin. The view advocated by the author is that protection of the perineum in the latter part of the second stage of labor is best secured by having the patient lying upon her side, and preventing the exit of the head until the vulvo-vaginal orifice is sufficiently dilated: should rupture occur, the immediate operation is advised, but the usual subsequent tying the knees together rejected.

The Relative Value of Hysterectomy and of the Complete Removal of the Uterine Appendages for the Cure of Uterine Fibroids is the title of an elaborate paper by Mr. Thornton. Mr. Thornton takes the ground that the operation of complete removal of the uterine appendages for fibroid and fibro-cystic tumors of the uterus is indicated in all cases which need the surgeon's aid, as an equally certain cure, and a more conservative and less dangerous operation than that of supra-vaginal hysterectomy. The paper elicited a most interesting discussion, in which Drs. Goodell, Thomas, and Kimball were the chief participants. Dr. Thomas very justly took the position that to expose a woman to the dangers of oöphorectomy or hysterectomy simply because she has a solid fibrous tumor of the uterus is a most unjustifiable procedure, and that the conservative surgeon will avoid any approach to hysterectomy for solid or fibro-cystic tumors of the uterus, unless the life of the patient seems to be in danger on account of the existence of the growth.

The next two papers are on *Electricity in Extra-Uterine Pregnancy*, by Dr. Garrigues, and *The History of Twenty-One Cases of Extra-Uterine Pregnancy*, by Dr. Thomas. The conclusions of the first author, made after a careful study of the subject, are:

"1st. Experience has proved electricity to be an efficacious and safe agent to arrest extra-uterine pregnancy during the first three months, and perhaps the pregnancy in some of the cases had even advanced more or less into the fourth month.

"2d. It seems likely that the same agent might be profitably used at any period of fœtal life."

Dr. Thomas takes the following positions: Before the end of the fourth month, destroy the life of the fœtus by electricity; if interference be necessary after the fourth month, perform laparotomy, or, if the tumor be low down in the pelvis, elytrotomy; if the pregnancy be abdominal, wait the full term of gestation, and deliver by laparotomy, or by elytrotomy combined with the forceps or manual delivery; if the full term of pregnancy be passed, and the fœtus dead, wait and watch, if it be possible, until nature demonstrates the outlet by which she desires extrusion to be effected, and then aid this effort.

The Influence of the Constant Use of High-Heeled French Shoes upon the Health and Form of the Female, and upon the Relation of the Pelvic Organs, is the title of an interesting paper by Dr. Samuel C. Busey, of Washington. Dr. Busey ably presents the injurious consequences that may result, and gives scientific proof that they ought to occur, from French high-heeled shoes. In the remarks which followed the reading of the paper both Dr. Barker and Dr. Thomas stated that while theoretically Dr. Busey's views were correct, yet they had not found the injury which was to be anticipated from wearing the shoes in question. Dr. Barker seemed to think that the shoe question was one which would be settled by the opinion of men, saying that "women have a sharp instinct, and will so array themselves as to make themselves attractive to the opposite sex." While this statement is generally true, yet sometimes women follow ugly and injurious fashions that are condemned alike by sensible persons, whether male or female; for example, what true admirer of womanly beauty, intellect, and purity does not abhor the hideous hiding of the forehead, animalizing, in almost every case, instead of spiritualizing the expression?

Mechanical Therapeutics of Versions and of Flexions of the Uterus is the title of a long and abundantly-illustrated paper by Dr. Ely Van der Warker, of Syracuse, New York. In the beginning of his paper Dr. Van der Warker says, "The correction of a flexion or version of the uterus mechanically, with certainty, comfort, and safety to the subject, depends, in the first place, upon a few fixed and absolute conditions which cannot be violated. I enumerate them: (*a*) The limits imposed by uterine mobility; (*b*) the limits imposed upon the action of pessaries by the vagina; (*c*) a pessary must be adjusted with proper regard for the safety of the pelvic soft parts; (*d*) a pessary must be so adjusted as not in any way to retard or arrest the function of any pelvic organ, nerve, or vessel."

After discussing these propositions, the author makes the usual classification of pessaries,—vaginal with external support, those that are solely vaginal, and, third, intra-uterine,—making some original and scientific subdivisions in each class. The whole paper is worthy the close study of any one who attempts to treat uterine diseases, but we have not space for any complete analysis of it.

Dr. J. Collins Warren contributes a paper entitled *A New Method of Operating for the Relief of Rupture of the Perineum through the Sphincter and Rectum.* Dr. Warren says, "The principle of the method described in this article consists in shutting out the rectum entirely by a flap-operation, so that it shall no longer enter as an element to be considered in the healing process. The material of which the flap is composed is that usually cut away by the scissors, and consists of vaginal and

vulvar mucous membrane, and also of a certain amount of cicatricial tissue which is to be found at the margin of the rent. The flap is formed by dissecting the 'butterfly' from within outward, preserving the materials just mentioned in one continuous mass, the pedicle being formed by the entire free margin of the septum, a hinge on which the flap is swung over so as to exclude the rectum from view." Dr. Warren advises the knife rather than the scissors to be used in the dissection. In this operation, of course, no tissue is cut away; it is all utilized. The plan seems so reasonable, and it has proved so successful in the hands of Dr. Warren, that it is well deserving of being followed by others.

Measurements of the Uterine Cavity in Childbed, begun by Dr. Sinclair, are continued by Dr. Richardson; he here presents a fourth and fifth series of one hundred and eight cases each. As no deductions are proposed to be made until the entire number of cases reaches one thousand, it is unnecessary to make other reference to this work at present.

Surgical Operations upon the Pelvic Organs of Pregnant Women is the title of a very able and interesting paper by Dr. Matthew D. Mann, of Buffalo. The following are the author's conclusions:

"1. Pregnancy is not so decidedly a bar to operations on the pelvic organs as is generally supposed. The results, however, vary with the operation and the organ operated upon.

"2. Union of denuded surfaces is the rule, and the cicatricial tissue formed during the earlier months of pregnancy is strong enough to resist the shock of labor at term.

"3. Operations on the vulva involve very little danger either to mother or to child.

"4. Operations on the vagina are likely to cause severe hemorrhages, but are not otherwise dangerous.

"5. Venereal warts and vegetations of large size and non-syphilitic are best treated by removal, whether they occur in the vagina or are confined to the vulva.

"6. Applications of nitrate of silver and astringents of this class may be made with safety to the vagina and cervix. Diffusible poisons, like carbolic acid and iodine, should not be used pure or in strong solutions for such applications.

"7. Operations upon the bladder and urethra are not dangerous, or likely to be followed by abortion.

"8. Operations on the rectum involving the sphincter ani, even if slight in their character, are dangerous.

"9. The operation for vesico-vaginal fistula should not be undertaken during pregnancy, as the dangers of hemorrhage and abortion are considerable.

"10. Plastic operations upon the cervix and perineum may, if necessary, be undertaken in the earlier months of pregnancy with a fair prospect of success, and with a good chance that the results may not be impaired by labor.

"11. Small polypi of the cervix may best be treated by torsion or strong astringents. If cut, there is some danger of abortion following.

"12. Large polypi may, if causing hemorrhage, be removed at once with a fair chance of good results. If not doing any harm, then removal is best left until near the close of pregnancy.

"13. Cancer of the cervix discovered during pregnancy should, if possible, be removed at once."

Dr. W. H. Baker, of Boston, contributes a paper upon *Hyperæmia of the Vesico-Urethral Membrane*. This paper is quite a practical one, and is illustrated by some chromo-lithographs.

The final paper is *A Memoir of the Late James P. White*, of Buffalo, by Dr. T. G. Thomas. Dr. White was a good man, and Dr. Thomas has not said a word too much in his praise.

The volume is concluded with a list of gynæcological journals and societies, and the usual but most valuable gynæcological index.

GLEANINGS FROM EXCHANGES.

A Rapidly Fatal Case of Arsenical Poisoning.—The following case presents several points of interest, the chief, however, being the rapidity with which a fatal result ensued. It was reported by David W. Finlay, M.D., in the London *Lancet*.

Richard H., aged 51 years, a man in moderate health, although not robust, swallowed by mistake, at 8.30 P.M. on February 27 last, nine drachms of a preparation for softening the skin of the hands, supposed to consist chiefly of glycerin, which was contained in a small flask-shaped spirit-bottle. He was seized with a feeling of faintness and collapse, and slight epigastric pain. He was brought without much delay to the Middlesex Hospital, arriving there about nine o'clock; and it was stated that he had not vomited. His skin was cold, and his face bedewed with clammy sweat; pulse slow and very feeble; respiration shallow; pupils moderately dilated, but acting to light. He presented generally the appearance of collapse, and complained of headache and pain at the epigastrium, with a sense of constriction across the chest. He was quite conscious, and kept spitting to clear his mouth of viscid mucus. An emetic of mustard-and-water was immediately administered, but did not induce vomiting, and the stomach-pump was then used, the stomach being well washed out. The matter removed from the stomach appeared to consist almost entirely of the mustard-and-water which had been given as an emetic.

Some brandy was then administered, and he was removed to the ward and put to bed between warm blankets, hot bottles being also applied. Notwithstanding, he speedily became pulseless, and, although stimulants were freely given, he rapidly sank, and died at half-past nine o'clock, one hour after swallowing the fatal dose.

At the post-mortem examination made by Dr. Fowler, the mucous membrane of the larynx was found moderately congested; the trachea was brightly injected throughout, and, with the larger bronchi, contained some very viscid mucus. The lungs were emphysematous and engorged. The right cavities of the heart contained some fluid blood and clots, the left were contracted and nearly empty; the valves and muscular substance were normal, but the endocardium of the left ventricle showed numerous ecchymoses. The liver and kidneys were congested, the spleen normal. The stomach contained about six ounces of turbid fluid, consisting apparently of brandy, mustard in solution, and viscid mucus. The mucous membrane was intensely injected; there were also a very few small ecchymoses, but no erosion of mucous membrane. The duodenum and jejunum contained pale pultaceous matter; the contents of the ileum and colon were brown and semi-solid. The bladder was contracted. It was, of course, sufficiently obvious that death was due to poison, but there seemed nothing either in the symptoms or post-mortem appearances to point conclusively to the particular poison, and hence at the inquest which was held an analysis of the stomach and its contents was ordered. This resulted in the detection of arsenious acid in large quantity, both in the matter removed from the stomach at the post-mortem examination, in the tissues themselves, and in the small quantity of fluid left in the bottle from which the unfortunate man had swallowed the poison.

What remained of the latter, together with the quantity which the bottle was known to contain by a mark left on it in consequence of the length of time the solution had remained in it undisturbed, supplied data for an estimation of the quantity of the fatal dose. The former, amounting to half a drachm, converted into sulphide, was found to represent exactly a decigramme, or rather more than one grain and a half, of arsenious acid, and, the total quantity of liquid in the bottle being nine drachms, would equal twenty-seven grains and three-quarters. Deducting from this total the quantity left in the bottle, the conclusion is reached that upwards of twenty-six grains had been swallowed. The fatal period is one of the shortest on record; indeed, I am aware of only one instance in which a more rapidly fatal result ensued. This occurred in the case of a youth aged 17, who was stated to have died within twenty minutes after a large dose, the symptoms being of a tetanic character. Reference is made to it in Taylor's "Principles and Practice of Medical Jurisprudence," vol. i. page 256, second edition, but details are wanting. In the present case, the largeness of the dose, its state in solution, and the comparatively empty condition of the stomach, all of which would favor rapid absorption, sufficiently account for the speedy death. The same considerations also account for the somewhat abnormal character of the symptoms, those referrable to the stomach being slightly marked, while collapse was profound and conspicuous. Such cases lend support to the opinions expressed by M. Vryens, whose experiments and the conclusions drawn therefrom are set forth in the "Archives de Physiologie," vol. viii., 1881. The latter are to the effect that the fundamental character of arsenical poisoning consists in a perversion of the entire nervous system, and that the pneumogastric, sympathetic, and vaso-motor nerves especially are paralyzed or reduced to a state of paresis.

MISCELLANY.

PHYSICIANS AND DRUGGISTS.—The following admirable series of rules have been submitted for the adoption of pharmacists and physicians in Cincinnati:

First.—Pharmacists shall not prescribe medicine for diseases.

Second.—Pharmacists shall not too frequently fill prescriptions which might lead to disease or vicious habits.

Third.—Pharmacists shall only supply medicines on prescriptions or where the complaint is stated by a customer to be one dangerous to life.

Fourth.—The right to refill prescriptions, when presented by the person to whom they were issued by the physician, is acknowledged.

Fifth.—Physicians should not dispense medicines, except in cases of emergency, nor prescribe proprietary, secret, or copyright medicines.

Sixth.—The prescription when in the hands of the pharmacist and filled shall be the latter's property, as it may be necessary for his protection.

Seventh.—The use of prescription-blanks by physicians, with the address of any individual pharmacist on them, is liable to misconstruction, and shall be discontinued.

Eighth.—The evils arising from the wholesale use of patent medicines are recognized, and their use discountenanced.

Ninth.—A Board of Arbitration consisting of five physicians and five druggists shall be appointed, who shall subscribe to these rules. This board shall hear all complaints against any subscriber to these rules for their violation, and shall decide disputes.

THE NEW YORK STATE MEDICAL SOCIETY.—From telegraphic dispatches from Albany just received, it appears that the New York State Society, in adopting a course which separated it from the American Medical Association and isolated it from the profession throughout the country, has finally alienated some of its oldest and most respected members. Without making comparisons, which are invidious, we would simply point to the names and relative position in the profession of the leaders of the two great parties in the controversy to show which better deserves the confidence and respect of the profession and the community. In New York City it was found necessary to form a new county medical society, which is in affiliation with the other county medical societies throughout the country. If the apparent necessity for a similar course has been forced upon the very respectable minority in attendance upon the meeting (but representing in reality the majority of the profession in New York State) we regret it, but consider it preferable to the unseemly wrangling which has disturbed the harmony of the last few meetings of this association. When the specialists find that they will have to go into a corner and flock by themselves, they may have cause to repent of their action and regret their loss of prestige in the profession. An account of this meeting will appear in our next issue.

THE PHILADELPHIA NEUROLOGICAL SOCIETY.—On Monday evening, January 28, 1884, a meeting of physicians of Philadelphia and vicinity who are specially interested in nervous and mental diseases was held at the hall of the College of Physicians, Thirteenth and Locust Streets, and organized the Philadelphia Neurological Society. The society will hold stated meetings on the fourth Monday of every month. The officers are:

President.—Dr. S. Weir Mitchell.

Vice-Presidents.—Drs. Charles K. Mills and Isaac N. Kerlin.

Secretary and Treasurer.—Dr. James Hendrie Lloyd.

Council.—Drs. S. Preston Jones, Wharton Sinkler, and J. T. Eskridge.

THE PHILADELPHIA CLINICAL SOCIETY, late the Northern Medical Association, reorganized January 25 at the College of Physicians. A large number of new members were enrolled, and the following officers elected for the ensuing year: President, Dr. Henry Beates, Jr.; first vice-president, Dr. E. E. Montgomery; second vice-president, Dr. Hannah T. Croasdale; corresponding secretary, Dr. J. E. Richardson; recording secretary, Dr. J. G. Heilman; reporting secretary, Dr. G. Betton Massey; treasurer, Dr. L. Brewer Hall; censors, Drs. A. S. Barton, S. N. Troth, Albert H. Smith, James B. Walker, and Henry Rihl. To this Society women physicians are eligible, as may be seen from the list of officers.

THE *Journal of the American Medical Association* has successfully entered upon its second volume, and shows marked improvement in proof-reading; but somebody is still responsible for a good deal of uncertainty about French spelling and accents ("*Annals de la Societè Medico-Chirurgicalè de Liege*," for example).

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL has been so successful that it will move to a new building on or about February 1, 1884, which will enable it to give hospital advantages to its matriculates. The new building is very large, being five stories high and having a front of ninety-five feet. The new announcement gives a list of one hundred and forty physicians, who were matriculates for the year ending November 1, 1883.

THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES has had seventy-two paying members in its different classes during the past term. During the nine and a half months from its opening there were treated three thousand three hundred and one new patients.

NOTES AND QUERIES.

ELISHA HARRIS, M.D.

Dr. Elisha Harris, Secretary of the State Board of Health of New York, died at Albany on the 31st ult., from peritonitis, after a week's illness. He was graduated at the College of Physicians and Surgeons in New York in 1849, and subsequently devoted himself to State medicine. He was secretary of the American Public Health Association from the time of its organization, and was very active in aiding the Sanitary Commission during the war. From 1866 to 1876 he was Sanitary Superintendent and Registrar of Vital Statistics in New York City. In 1881, becoming a member of the State Board of Health, he became very active in organizing and perfecting its work. He was known as a writer upon vital statistics and sanitary matters, being a valued contributor to the Proceedings of the American Public Health Association. He died in the 60th year of his age.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 26, 1884, TO FEBRUARY 2, 1884.

ALEXANDER, CHARLES T., MAJOR AND SURGEON.—So much of Paragraph 1, S. O. 211, September 14, 1883, as directs him to report in person to the commanding general Department of the Missouri, for duty, is revoked, and he will, upon the expiration of his present leave of absence, proceed to St. Louis, Mo., and assume duty as attending surgeon and examiner of recruits in that city. Paragraph 1, S. O. 21, A. G. O., January 25, 1884.

ELBREY, FREDERICK W., CAPTAIN AND ASSISTANT-SURGEON.—Present leave of absence extended six months. Paragraph 9, S. O. 24, A. G. O., January 25, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM JANUARY 19, 1884, TO FEBRUARY 2, 1884.

P. A. Surgeon ROBERT WHITING detached from the hospital Norfolk, Va., and ordered to the "Colorado."

Assistant-Surgeon H. B. FITTS detached from the "Jamestown" and ordered to the coast survey steamer "Gedney."

P. A. Surgeon F. ANDERSON granted leave of absence for six months.

P. A. Surgeon S. W. BATTLE detached from the U.S. steamer "Gedney" and placed on sick leave.